

BUTTERFLIES OF THE STATE OF COLIMA, MEXICO

ANDREW D. WARREN

9951 East Ida Place, Greenwood Village, Colorado 80111, USA

AND

ISABEL VARGAS F., ARMANDO LUIS M., AND JORGE LLORENTE B.

Museo de Zoología, Facultad de Ciencias, Universidad Nacional Autónoma de México.
Apdo. Postal 70-399, México 04510 D.F., MEXICO

ABSTRACT. A survey of the butterflies of Colima, Mexico is presented, in which 543 species from 280 genera and 22 subfamilies of Papilionoidea and Hesperioidea are listed. Over 100 species are reported from Colima for the first time. This list was created by reviewing the past Lepidoptera literature, the major collections in the United States and Mexico with Mexican material, as well as by fieldwork at 10 sites carried out by the authors. For each species, capture localities, adult flight dates, and references for the data are provided. An analysis of our knowledge of Colima's butterfly fauna is presented, and comparisons with equivalent faunal works on Jalisco and Michoacán are made. About 78% of the species known from Colima are also known from Michoacán, while about 88% of the species reported from Colima are also known from Jalisco. There are 31 species that have been reported from Colima but not from Michoacán or Jalisco, and for most of these, we have no explanation for such an exclusive distribution, except the need for more fieldwork in all three states. Only one species, *Zobera albopunctata*, appears to be endemic to Colima.

Additional key words: biogeography, conservation, distribution, Hesperioidea, Papilionoidea.

RESUMEN. Se integró la lista de los Rhopalocera del estado de Colima, México, que consta de 543 especies, pertenecientes a 280 géneros, 22 subfamilias y cinco familias. Se mencionan mas de 100 nuevos registros para Colima. Esta lista se formó a partir de la revisión detallada de la literatura publicada sobre Lepidoptera y de las principales colecciones de los Estados Unidos y México con ejemplares de México, así como del trabajo de campo efectuado por los autores en diez sitios en el estado. Para cada especie se presentan las localidades de ocurrencia, los meses y la colección donde están depositados los ejemplares o la cita bibliográfica de la cual fue tomado el dato. Se presenta un análisis sobre el conocimiento de los papilionoideos del estado de Colima y se compara con trabajos equivalentes en los estados de Jalisco y Michoacán; se advirtió que el 78% de las especies que se conocen para Colima también se encuentran en Michoacán y el 88% en el estado de Jalisco. Se determinó que existen 31 especies exclusivas a Colima, aunque para algunas de ellas no tenemos explicación por tal exclusividad, excepto la necesidad de más trabajo de campo formal en los tres estados. Una especie parece ser endémica a Colima, *Zobera albopunctata*.

Palabras clave adicionales: biogeografía, conservación, distribución, Hesperioidea, Papilionoidea.

In order to improve our knowledge of the distribution and diversity of the butterfly species of Mexico's Pacific coast, lists of the butterflies of the state of Jalisco were recently published (Llorente et al. 1995, Vargas et al. 1996, Warren et al. 1996). To further our objective, we present an equivalent list of the butterflies of the state of Colima, and compare our

results with the Jalisco list and a preliminary list of the species known from Michoacán being prepared by the authors, in order to analyze overall distributions of butterflies in this western Mexican region.

ANTECEDENTS

There has been little research on the butterflies of the state of Colima. There are no regional lists of butterflies from any locality in Colima in the literature, and there are no published reports of extensive exploratory fieldwork in the state. The data on Colima butterflies in the literature is in the form of scattered records, which have never represented the true diversity of butterflies present in the state. The first published records of butterflies from Colima are in the *Biología Centrali Americana* by Godman and Salvin (1878–1901). The *Biología* gives distributional records for most species treated, citing localities, and in some cases, elevation, vegetation, and other ecological conditions where the species were found. Only 14 species were cited in the *Biología* from the state of Colima, from only two localities: Colima (city) and Manzanillo. The comprehensive work by Seitz (1924), which treated all the known butterfly species of the Americas, made explicit mention of only one species from the state of Colima: *Papilio eracon* Godman & Salvin (listed herein as *Battus eracon*). In 1940–1941, Carlos Christian Hoffmann, in his *Catálogo Sistemático y Zoogeográfico de los Lepidópteros Mexicanos*, listed 1240 species of butterflies from Mexico, of which 105 species were reported from the state of Colima, although no localities in Colima were listed for any species.

In the Lepidoptera literature we have identified over forty works that cite distributional records from Colima, and these are listed below under Materials and Methods. The studies by Vázquez (1957, 1958) and Brown (1990) include descriptions of new taxa from the Revillagigedo Islands, which are part of the state of Colima. The most recent publication for our purposes is *Mariposas Mexicanas* by De la Maza (1987), which cites 58 species of butterflies from ten localities in the state of Colima, including: Armería, Colima, Comala, El Jabalí, La Salada, Madrid, Manzanillo, San Antonio, Suchitlán, and Tecomán.

During this century, some of the principal collections of Mexican butterflies, including those made by Hoffmann and Escalante were sold to museums in the United States. Additionally, the majority of foreign collectors deposit their material in collections in the United States. We have recorded data from the majority of the Mexican specimens deposited in foreign collections, and have formed a computerized database with the information. Table 1 lists some of the foreign museums that house specimens from Colima. For example, the San Diego Natural History Museum contains more than 1700 specimens from over 20 lo-

TABLE 1. Eight collections in the United States and Europe with material from the state of Colima, including numbers of species and specimens, as well as names of collectors and localities represented in each collection. Collection abbreviations are listed in the Materials and Methods section. Single asterisk = all butterfly families except Hesperiidae included in numbers; double asterisks = numbers refer to Hesperiidae only.

Collection	No. Specimens	No. Species	Localities	Collectors
AME*	169	64	La Salada, Colima, Comala, Manzanillo	R. Wind
AMNH	964	282	Colima, La Salada, Manzanillo	C. Hoffmann, R. Wind, P. Hubbell
CAS	15	11	Ameria Bridge	
CMNH	446	130	Comala, Colima	R. Wind
LACM*	176	54	Isla Clarion, Isla Socorro, Manzanillo	Y. Dawson, J. A. Comstock
SDNHM	1733	186	Colima, Madrid, La Salada, Tamala, Queseria, Pueblo Juarez	R. Spade
USNM	266	40	Colima, Manzanillo	S. S. Nicolay
BMNH**	41	19	Colima	Draudt collection

calities, taken by Paul Spade, who collected for five years (1980–1984) in the state of Colima.

During the 1970s and part of the 1980s, Sergio Hernández Tobías, a resident of the city of Colima accumulated a collection of butterflies from the state, which was well preserved for several years, but was greatly reduced in the late 1980's due to a lack of maintenance. In 1990, his family donated a portion of the remaining collection to the "Alfonso L. Herrera" Zoology Museum at U.N.A.M.'s Facultad de Ciencias (MZFC), which contained about 300 specimens of 166 species. Some material from the original collection remains under the custody of Hernández' family (mostly various Theclinae), and was not examined during this study.

For the past five years, as part of a study on the distribution of the butterflies of Mexico's Pacific coast, the MZFC has been carrying out a faunal inventory of the Sierra de Manantlán (Jalisco-Colima). During this study, two localities in Colima were studied intensively (Agua Dulce, Mpio. Villa de Álvarez; Platanarillos, Mpio. Minatitlán), which has resulted in the collection of about 2800 specimens of 216 and 241 species, respectively. Additionally, during 1995–1996, six localities surrounding Manzanillo were studied. At four of the localities, we recorded more than one hundred species in a day, with three to four researchers in the field daily. The diversity of species found at these localities demonstrates that previous collecting efforts in Colima have been very incomplete, since in this list we record 50 localities (48% of all the localities) from which only one or two species are known.

STUDY AREA

The state of Colima is situated in the southwestern part of the Mexican Republic, between the parallels of 19°31'N and 18°41'N, and 103°29'W and 104°35'W. Colima occupies 5191 km², and represents only 0.3% of Mexico's total surface area. The highest elevations in the state are the Volcán de Colima, at 3820 m, the Sierra de Manantlán at 2420 m, and Cerro Grande at 2200 m. Geologically, Colima consists of the Neovolcanic Chain (18%), and the Sierra Madre del Sur (82%). The climate in Colima is mostly hot and humid, except in mountainous areas above 1000 m.

The *Inventario Nacional Forestal de Gran Visión* (SARH 1992) records seven types of vegetational life-zones in Colima, with tropical semi-deciduous forest occupying one-third of the land area (31%). Tropical deciduous forest and thorn forest combined make up an additional 11% of the area. About 36% of the land surface has been altered for agricultural use. The flora of the state is well studied, with 7500 species recorded and an endemism rate of only 1%. The fauna of the state is not as well known. The state has four protected areas (Flores & Gerez 1994).

MATERIALS AND METHODS

Literature and collections. This list was compiled by consulting the computerized database at the MZFC, which includes the data from all the Mexican butterfly specimens examined in foreign and Mexican museums and collections, as well as data from the past Lepidoptera literature. Sources for Colima butterfly records, and sources relating to the nomenclature used in the species list include: Bauer (1960, 1961), Beutelspacher (1976, 1984), Beutelspacher and Brailovsky (1979), Brown (1990), Burns (1994, 1996), Clench (1946, 1972, 1975, 1981), Comstock (1953, 1954, 1955), D'Almeida (1966), R. E. De la Maza (1980), R. E. De la Maza & R. Turrent (1985), R. R. De la Maza (1987), Domínguez & Carrillo (1976), Field (1967), Freeman (1969, 1970, and unpubl. data), Hernández et al. (1981), Jenkins (1983, 1984, 1985, 1986, 1990), Johnson (1989a, 1989b, 1991), Jurado (1990), Kendall and McGuire (1984), Lamas et al. (1995), Luis et al. (1996), Miller (1974, 1978), Miller & J. De la Maza (1984), Neild (1996), Nicolay (1976, 1979), Robbins (1991), Rothschild & Jordan (1906), Skinner (1919), Spade et al. (1988), Tyler (1975), Tyler et al. (1994), Vázquez (1956, 1957, 1958), Vázquez & Zaragoza (1979), Velázquez (1976), Velázquez, & Velázquez (1975) and Warren (1995, 1996, 1998).

The following is an alphabetical list of the abbreviations used for the museums and collections examined: **ADW** = recorded by Andrew D. Warren; **AME** = Allyn Museum of Entomology (Sarasota, FL); **AMNH**

= American Museum of Natural History (New York, NY); **BMNH** = The Natural History Museum (London, England); **CAS** = California Academy of Sciences (San Francisco, CA); **CIB** = Entomology collection in the Instituto de Biología, U.N.A.M. (Mexico City); **CIPN** = Müller collection at the Instituto Politécnico Nacional, see Vázquez (1956), actually at the Natural History Museum in Mexico City; **CMNH** = Carnegie Museum of Natural History (Pittsburgh, PA); **CUIC** = Cornell University Insect Collection (Ithaca, NY); **DGSV** = Dirección Nacional de Sanidad Vegetal, see Hernández et al. (1981); **DMNH** = Denver Museum of Natural History (Denver, CO); **INIA** = Instituto Nacional de Investigaciones Agrícolas, see Domínguez & Carrillo (1976); **JC** = Collection of Dale and Joanne Jenkins, see Jenkins (1983); **LACM** = Los Angeles County Museum of Natural History (Los Angeles, CA); **MZFC** = "Alfonso L. Herrera" Zoology Museum in the Facultad de Ciencias, U.N.A.M. (Mexico City)—includes part of the Sergio Hernández Tobías collection; **RES** = Collection of Ray E. Stanford (Denver, CO); **SDNHM** = San Diego Natural History Museum (San Diego, CA); **UCR** = University of California (Riverside, CA); **USNM** = United States National Museum of Natural History, Smithsonian Institution (Washington, D.C.); **exCLGC** = González Cota collection, now at the MZFC. The fieldwork carried out in the Sierra de Manantlán and around Manzanillo by the authors provided a considerable number of the records presented in this list (MZFC and ADW).

Species list. This list is structured in the same format as the list on Jalisco butterflies (Vargas et al. 1996). Higher classification in this list follows that of Scott (1985), recognizing five families. Within each family, species are arranged in their approximate phylogenetic order, according to subfamilies. Many sources were consulted in determining the nomenclature used in the species list, including many of the works cited in the Jalisco list for nomenclatural purposes. For Hesperioida, we have followed the nomenclature used in Warren (1998), which includes some modifications from the nomenclature in previous Jalisco lists (Llorente et al. 1995, Vargas et al. 1996, Warren et al. 1996). Major deviations from names used in the Jalisco lists are explained. For the Eu-maeini, we have utilized the nomenclature of Robert K. Robbins (USNM), and in other families, we have often relied on the expert opinion of Gerardo Lamas (Museo de Historia Natural, Universidad Mayor de San Marcos, Lima, Perú). For a detailed description on how to extract information from the species list, see the paragraphs following "Butterflies of Jalisco" in the Jalisco list (Vargas et al. 1996:105). Table 2 lists the abbreviations used in the species list for the 25 most commonly cited localities in Colima. In many cases, where we encountered locality labels on specimens from "Colima," we were unable to tell if the speci-

TABLE 2. Abbreviations used in the species list for the 25 most commonly cited Colima localities, the number of species from each locality, and the species richness of each locality; 1 = locality with the greatest number of recorded species, 25 = locality with the fewest recorded species. Species richness numbers correspond to locality numbers of Fig. 1. Data from 54 species from El Jabali were obtained too late to be included in this Table.

Abbreviation	Locality	No. Species	Species Richness
AD	Agua Dulce, 600 m	216	3
BAG	Barranca de Agua, 1600 m	14	22
CAL	Caleras, 100 m	36	18
CHAN	2 km W Chandiabio, 150 m	113	10
COL	Colima City, 500 m	270	1
"COL"	Colima, general record	84	11
COM	Comala, 600 m	147	4
COSU	Cofradía de Suchitlán, 1300 m	43	16
ESA	El Salto, 200 m	121	7
ETE	El Terrero, 2000 m	11	24
LSA	La Salada, 400 m	144	5
MAD	Madrid, 250 m	42	17
MZO	Manzanillo, 0-30 m	128	6
OJO	Ojo de Agua, Madrid, 250 m	45	15
PA	Paso Ancho, 100 m	116	9
PACA	Punta de Agua de Camotlán, 100 m	117	8
PENU	Pedro Núñez, 200 m	75	12
PJU	Pueblo Juarez, 250 m	22	20
PLAT	Platanarillos, 900 m	241	2
PORO	3-5 km NE Playa de Oro, 60 m	66	13
RI	Revillagigedo Islands	10	25
SUCH	Suchitlán, 1000 m	35	19
TAM	Tamala, 200 m	54	14
TECL	Tecolapa, 220 m	17	21
TECM	Tecomán, 100 m	12	23

mens were collected in the city of Colima, or if they represented general records for the state. For species that are recorded from "Colima" that probably did not come from the city (e.g., high elevation species), we have used the abbreviation "COL." Records for species that were definitely or are likely to have been from around the city of Colima are indicated by the abbreviation COL.

RESULTS

Based on our review of collections, publications, and field work carried out to date, we have obtained a list of 543 species of butterflies from Colima, that includes 280 genera in 22 subfamilies of the five recognized families. Over 50 publications were consulted while forming this list, and over 10,000 pinned specimens were examined from 102 localities. We report over 100 species from Colima for the first time.

Since Colima is completely surrounded by Jalisco, except for where it shares its border with Michoacán to the southeast, and since the butter-

TABLE 3. Distribution of species recorded from Colima (COL) in contiguous states of Jalisco (JAL) and Michoacán (MIC), showing percentages of Colima species (543 total) unique to each listed region. All Colima data are from this paper; Jalisco data are from Vargas et al. (1996); Michoacán data are from a study in preparation by the authors.

COL Total	JAL-COL-MIC	COL-JAL	COL-MIC	COL Only
543	387	89	36	31
100%	71.3%	16.4%	6.6%	5.7%

fly fauna of these three states is being systematically collected and studied (as defined by Luis et al. 1991), we have prepared Table 3, which shows the number of species that are known from Colima, those shared by each of the other states, and the number of species that are known from all three states. Out of the 543 species cited from Colima, 31 (5.7% of Colima total) have been recorded only from Colima, and 512 are shared with the other states (Jalisco and Michoacán). Of the 512 shared species, 89 (16.4% of Colima total) are shared only with Jalisco, and 36 (6.6% of Colima total) are shared only with Michoacán; 387 species (71.3% of Colima total) are known from all three states.

We have taken special notice of the 31 species that are known from Colima and are still unknown from Jalisco or Michoacán, and these are indicated in the species list by a •. We consider the occurrence of 5 of these species in Colima (about 1% of state total) to be based on dubious records, rare strays, or transplants, and are bracketed in the list by {}. Some of the species not shared with Jalisco or Colima, including *Phyciodes phaon* (Edwards), *Cyllopsis windi* Miller, *C. diazi* Miller, *Emesis tegula* Godman & Salvin, and *Theope mania* Godman & Salvin, are known from Nayarit or Sinaloa to the north and Guerrero to the south, indicating the need for more fieldwork in all three states. Some of Colima's 31 "unique" species, including *Aethilla lavochrea* Butler, and *Lasaila sessilis* Schaus, are shared with Guerrero and not Jalisco, Nayarit or Sinaloa, and four of the "unique" species unknown from Jalisco, Michoacán, or Guerrero, are known from Nayarit or Sinaloa, including *Moeris stroma* Evans, *Tromba xanthura* (Godman), *Taygetis virgilia* (Cramer), and *Caerofethra carnica* (Hewitson). Many of the species unknown from Jalisco or Michoacán are not known from western Mexico north of Oaxaca, but are small, fast-flying species (mostly skippers and hairstreaks) that may have been easily overlooked, so are not considered dubious records (although some may be), including: *Staphylus tepeca* (Bell), *Decinea mustea* H. A. Freeman, *Calephelis laverna laverna* (Godman & Salvin), *Calephelis argyrodines* (Bates), *Lemonias agave* Godman & Salvin, *Symbiopsis aff. tanais* Godman & Salvin, *Tmolus crolinus* (Butler & Druce), and *Nesiostrymon celona* (Hewitson). The disjunct distributions of these species highlight the need for further

fieldwork throughout western Mexico. One skipper species appears to be endemic to Colima, *Zobera albopunctata* H. A. Freeman. There are few species that we can consider broadly distributed in Colima with the available information, but this is probably the result of the lack of previous fieldwork in Colima and the rest of western Mexico.

Other state lists of butterflies that have recently been completed (Vargas et al. 1991, Luis et al. 1991, Vargas et al. 1996, Luis et al. 1996) are consistent with our data for Colima, in that the majority of the records are from fewer than 10 localities in the two or three faunal regions with the greatest ecological heterogeneity and faunal diversity (Sierra de Atoyac in Guerrero, Sierra de Juarez in Oaxaca, Sierra de Manantlán in Colima and Jalisco, Teocelo-Jalapa and Sierra de los Tuxtlas in Veracruz). Such intensive fieldwork at previously uncollected localities has enabled us to begin to identify certain species as "rare," with very restricted spatial or temporal distributions. However, the empirical species accumulation curves for these localities (as described by Soberón & Llorente 1993) indicate that we should still expect additional species from even the best collected areas, and with future fieldwork in these areas, we will be better prepared to identify potentially "rare" species.

Figure 1 shows the twenty five localities in the state of Colima with the greatest numbers of butterfly species, according to the data in this list. Species from UCR from El Jabali (with 54 species) were examined too late in this study to be included in Fig. 1 or Table 2. Colima (city) appears to host the greatest diversity of butterfly species in the state, even though many of the "Colima" records we have come across probably represent general records for the state, and do not represent the city of Colima, as discussed above (Table 2). The estimated richness of species (excluding Hesperiidae) for Agua Dulce and Platanarillos is probably close to the true species richness (for Papilionoidea), because these two localities have been systematically and exhaustively collected for several years, and have been monitored by species accumulation curves. La Salada, Colima, Comala, and Manzanillo are the four localities in the state that have been traditionally collected by Mexicans and Americans, but have never been collected in a systematic manner. The four remaining localities, El Salto, Punta de Agua de Camotlán, Paso Ancho, and 2 km W Chandialbo, were each only collected on one day, by a team of three to four researchers, and the true number of species in these localities is probably much higher; these would be excellent areas to conduct formal studies in the future.

It is necessary to continue the systematic collection and documentation of butterflies in all three states, Jalisco, Colima, and Michoacán, as well as in other northwestern Mexican states, especially Nayarit, Sinaloa, and Sonora. 423 (78%) of the species known from Colima are also

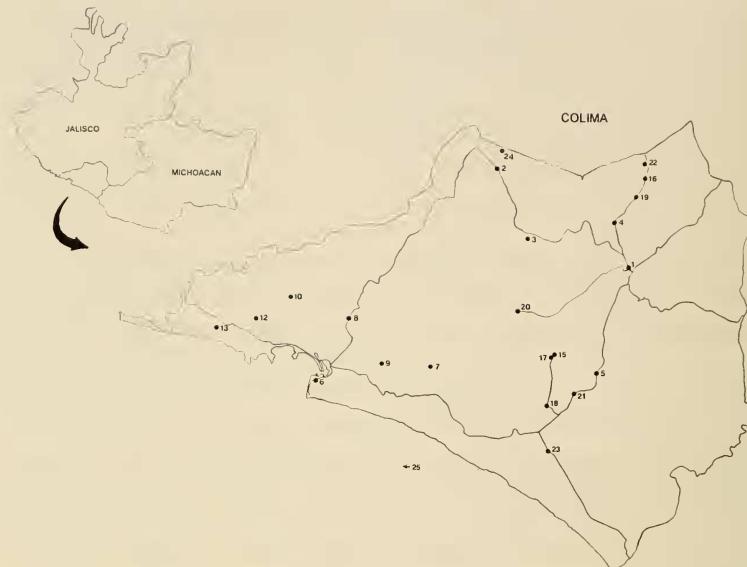


FIG. 1. Areas of greatest species diversity of Rhopalocera in the state of Colima. Major highways in Colima are indicated on the map by solid lines. Numbers correspond to localities listed in Table 2, the 25 localities in the state with the greatest numbers of recorded species (#1 = greatest; #25 = fewest recorded species; #25, Revillagigedo Islands are not shown on the map). Smaller map shows the positions of Jalisco, Colima and Michoacán in western Mexico.

known from Michoacán, and 476 (88%) of the species known from Colima are also known from Jalisco. However, each state still has "exclusive" species, unknown from the other two states, for which we have no ecological, historical, or biogeographical explanation. With Colima only being 6.5% the size of Jalisco (in total surface area), or slightly smaller than the state of Delaware in the United States, 543 species confirmed from Colima suggests that the number of species that actually occur in Jalisco is much higher than has been reported. Vargas et al. (1996) reported 608 species from Jalisco, however the current number of species known from that state is 620 (unpubl. data). The true number of species that occur in Jalisco certainly approaches 700, while Colima is probably home to about 600 species. Only future fieldwork can verify these projected numbers.

BUTTERFLIES OF COLIMA

HESPERIIDAE (221 SPECIES)

- *{Pyrrhopyge crida}* (Hewit. [1871]). "COL" (AMNH).

Pyrrhopyge chloris Evans 1951. "COL" (CMNH); Río Comala, COM ix (MZFC); San Gerónimo vii (AMNH); SUCH ix (SDNHM).

Pyrrhopye araxes araxes (Hewit. 1867). "COL" xii (AMNH).

Elbella scylla (Mén. 1855). "COL" (CMNH); COM iii,iv,ix,x (AMNH); El Jabali viii (UCR); LSA ix (AMNH); PA xii; PACA i (ADW).

Mysoria amra (Hewit. [1871]). AD vi (ADW), ix (MZFC); COM X (AMNH); COL v (BMNH); ESA i (ADW); MZO xii (USNM); PACA i (ADW).

Mysoria affinis (Herr.-Sch. 1869). AD iv,ix,xii (MZFC); "COL" (CMNH); COL iv,ix; COM iv (AMNH); ESA i (ADW); LSA vi (AMNH); MZO xii (USNM); OJO iii,v (MZFC); PACA i; PENU i (ADW); PLAT ix (MZFC); Río Comala, COM ix (MZFC).

Myscelus amystis hages Godm. & Sal. 1893. LSA xi (AMNH).

Phocides belus Godm. & Sal. 1893. "COL" (AMNH, CMNH); COL ix (MZFC), X (SDNBM).

Phocides pigmalion pigmalion (Cr. [1779]). "COL" (AMNH).

Phocides palemon lilea (Reak. [1867]). "COL" (AMNH, CMNH).

Proteides mercurius mercurius (Fabr. 1787). CHAN i (ADW); LSA viii (MZFC); PACA i; PORO xii (ADW).

Epargyreus exadeus cruza Evans 1952. COL iii (MZFC); COM v,x; LSA iv–vi,ix (AMNH), viii; PLAT ix (MZFC).

Epargyreus windi H. A. Freeman 1969. COSU vii (MZFC); LSA v–vii (AMNH); OJO vi; PLAT ix (MZFC).

Epargyreus spina Evans 1952. COM viii; LSA v,vi,viii (AMNH).

Epargyreus aspina Evans 1952. COM x; LSA vi (AMNH); PLAT ix (MZFC); PORO xii (ADW).

Epargyreus spinosa Evans 1952. AD vi (ADW).

Polygonus leo arizonensis (Skinner 1911). CHAN i (ADW); "COL" (CMNH); COM x; LSA ix (SDNBM), X (AMNH).

Polygonus manueli Bell & Comstock 1948. TAM viii,ix (MZFC).

Chioides zilpa (Butl. 1872). CHAN i (ADW); "COL" (CMNH); El Jabali viii (UCR); ESA i (ADW); LSA ix (MZFC, SDNBM), v (AMNH); OJO iii (MZFC); PA xii; PACA i; PORO xii (ADW); TAM xi (MZFC).

Chioides catillus albofasciatus (Hewit. 1867). COL viii (MZFC); El Jabali viii (UCR); ESA i (ADW); MZO xii (USNM); PA xii; PACA i (ADW); PLAT ix,xii (MZFC); PORO xii (ADW).

Aguna asander asander (Hewit. 1867). AD vi (ADW); "COL" (CMNH); COL i (AMNH); MZO i,xii (USNM); OJO iii (MZFC); PENU i (ADW).

Aguna metophis (Latr. [1824]). COM (Freeman unpublished).

Typhedanus undulatus (Hewit. 1867). AD ix (MZFC); COL ii; COM iii; Cuyutlán i (AMNH); El Jabali viii (UCR); MZO xii (USNM); PA xii (ADW).

Typhedanus ampyx (Godm. & Sal. 1893). AD vi (ADW), xii (MZFC); LSA ix (SDNBM); OJO v (MZFC); PLAT xii (MZFC).

Polythrix octomaculata (Sepp 1848). CHAN i (ADW); COM iii (AMNH); ESA i (ADW); LSA X (AMNH); PACA i (ADW); TAM viii (MZFC).

Polythrix asine (Hewit. 1867). CHAN i (ADW); COL i (BMNH); COM iv (AMNH); ESA i (ADW); LSA v,vi,xi (AMNH), ix (SDNBM); MZO i (ADW), xii (USNM); PA xii; PENU i (ADW); PLAT iii (MZFC); PORO xii (ADW).

Codatractus sallyae A. D. Warren 1995. AD vi (ADW; Warren 1995).

Codatractus melon (Godm. & Sal. 1893). AD vi (ADW); "COL" (CMNH); LSA v,vi (AMNH), viii, ix (SDNBM); OJO viii; TAM ix (MZFC).

Codatractus bryaxis (Hewit. 1867). PLAT ix (MZFC).

Codatractus uvydixia (Dyar 1914). LSA v,vi (USNM). See Burns (1996).

"*Codatractus*" hyster (Dyar 1916). LSA viii (MZFC); PLAT vi (ADW). See Burns (1996).

Urbanus proteus proteus (L. [1758]). "COL" (CMNH); COSU xi (MZFC); COM vii (AMNH); ESA i; MZO i,xii; PA xii; PORO xii (ADW).

Urbanus belli (Hayward 1935). CHAN i; ESA i (ADW); Hacienda San Antonio xi (MZFC); PLAT vi (ADW).

Urbanus pronta Evans 1952. CHAN i (ADW); COL v (BMNH).

• ***Urbanus* sp. undescribed.** COSU xi (MZFC).

Urbanus esmeraldus (Butl. 1877). COM iii–v,vii,ix,x (AMNH); MZO i (ADW); San Gerónimo xi (AMNH).

Urbanus evona Evans 1952. COL ii (AMNH).

Urbanus prodicus Bell 1956. COL iii (MZFC).

Urbanus esta Evans 1952. COM iv,xi (AMNH); San Gerónimo xi (Freeman unpublished).

Urbanus dorantes dorantes (Stoll 1790). AD vi (ADW), ix,xii (MZFC); CHAN i (ADW); "COL" (CMNH); COL vii (MZFC), xii (BMNH); COL, 5 mi SW vii (AMNH); COSU iv (MZFC); ESA i; MZO i,xii (ADW), xi (AMNH); OJO xii (MZFC); PA xii; PACA i; PENU i; PLAT vi (ADW), iv,ix,xii (MZFC); PORO xii (ADW).

Urbanus teleus (Hübner 1821). COSU iv (MZFC); COL iii (AMNH); PA xii (ADW); PLAT iii,ix (MZFC).

Urbanus procne (Plötz 1881). AD ix (MZFC); "COL" (CMNH); COL i,v (BMNH), viii (MZFC); MZO xii (USNM); PA xii; PORO xii (ADW).

Urbanus simplicius (Stoll 1790). "COL" (CMNH); COL ii,iii (AMNH), v (BMNH); ESA i; MZO i (ADW), xii (USNM); PA xii; PACA i (ADW); PLAT ix (MZFC).

Urbanus doryssus chales (Godm. & Sal. 1893). CAL ii; COL v (MZFC); COM iv,v,x (AMNH); OJO v (MZFC).

Astraptes fulgerator azul (Reak. [1867]). CAL X (MZFC); CHAN i (ADW); "COL" (CMNH); COL iii,v (MZFC); COM iv (AMNH); COSU x,xii; ESA i (ADW); MZO (AMNH), i (ADW); OJO i (MZFC); PA xii; PACA i; PORO xii (ADW); TECL viii (SDNIM).

Astraptes alector hopfferi (Plötz 1882). AD iv,xii; CAL X (MZFC); CHAN i; ESA i (ADW); LSA ix (MZFC, SDNIM), X (AMNH); MZO i (ADW); OJO i,iv (MZFC); PACA i; PENU i (ADW); PLAT ix,xii (MZFC); PORO xii (ADW); Volcanillos xi (MZFC).

Astraptes anaphus annetta Evans 1952. CAL ii,x (MZFC); CHAN i (ADW); COL ii (AMNH); ESA i; MZO i (ADW); OJO i,v (MZFC); PA xii; PACA i; PENU i (ADW); PLAT iii,ix (MZFC); PORO xii (ADW).

Astraptes egrius (Butl. 1870). CAL i; COL X (MZFC), ii; COM iv (AMNH); ESA i (ADW); OJO v; PLAT iv (MZFC).

Narcosius parisi helen (Evans 1952). PA xii (ADW).

Autochton cincta (Plötz 1882). "COL" xii (AMNH).

Autochton neis (Geyer [1832]). "COL" (CMNH); COM viii (AMNH); ESA i (ADW); SUCH X (MZFC, SDNIM).

Achalarus casica (Herr.-Sch. 1869). LSA v (AMNH).

Achalarus toxaeus (Plötz 1882). AD ix (MZFC); CHAN i (ADW); COL i (BMNH), viii (MZFC), ii,iii,v; COM iii,iv,vi,x (AMNH); ESA i (ADW); LSA v (AMNH); Las Conchas, Ixtlahuacán viii (MZFC); MZO i (ADW); OJO v (MZFC); PA xii; PACA i (ADW); PLAT iv (MZFC); Río Comala, COM X (MZFC).

Thorybes pylades (Scudder 1870). "COL" xii (AMNH). While this species probably does not occur in the city of Colima, it probably does occur at high elevations on the Nevado de Colima.

Thorybes drusius (W. H. Edw. [1884]). "COL" xii (AMNH).

Thorybes mexicana mexicana (Herr.-Sch. 1869). "COL" i (AMNH).

Cabares potrillo (Lucas 1857). AD vi (ADW); CAL ii (MZFC, SDNIM); CHAN i (ADW); COL i–iv,xii (AMNH), X (SDNIM); COSU xii (MZFC); ESA i; MZO i,xii; PA xii; PACA i; PENU i; PLAT vi (ADW).

Ocyba calathana calanus (Godm. & Sal. 1894). AD vi; CHAN i (ADW); "COL" (CMNH).

Celaenorrhinus stola Evans 1952. AD xii (MZFC).

Celaenorrhinus fritzgaertneri (Bailey 1880). Alvarez i,ii (AMNH); "COL" (CMNH); COL v (BMNH); El Cobano, 15 mi S Río Salado i (ADW); MAD v (MZFC).

Spathilepia clonius (Cr. [1775]). CHAN i (ADW); COL iii; COM iii,v (AMNH); El Jabilo viii (UCR); ESA i (ADW); LSA ix (SDNIM); OJO viii (MZFC); PACA i (ADW); PLAT i,ix (MZFC), vi (ADW).

Cogia hippalus hippalus (W. H. Edw. 1882). COL (Godman & Salvin 1887–1901); OJO v (MZFC).

Cogia calchas (Herr.-Sch. 1869). "COL" (CMNH); LSA vi (AMNH); TAM viii (MZFC).

Cogia cajeta eluina Godm. & Sal. 1894. PENU i (ADW); Tinajas vii (SDNBM), ix (MZFC).

Cogia aeventinus (Godm. & Sal. 1894). "COL" (AMNH).

Polyctor cleta Evans 1953. CHAN i (ADW); LSA v,ix,x (AMNH); PA xii; PACA i (ADW).

Nisoniades rubescens (Möschler 1876). AD xii; CAL i (MZFC); "COL" (CMNH); PA xii; PACA i (ADW).

Nisoniades ephora Herr.-Sch. 1870. LSA xi (AMNH).

Pellicia arina Evans 1953. LSA v,xi (AMNH); PACA i (ADW).

Pellicia dimidiata Herr.-Sch. 1870. CHAN i (ADW); COL ii (AMNH); ESA i (ADW); LSA ix (MZFC, SDNBM); PA xii; PACA i; PENU i (ADW).

Noctuana stator (Godm. & Sal. 1899). El Jabali viii (UCR).

Windia windi H. A. Freeman 1969. LSA [Type Locality] vi,ix (AMNH), ix (MZFC).

Bolla subapicatus (Schaus 1902). COSU viii,ix (MZFC); El Jabali viii (UCR); LSA viii (AMNH); SUCH viii,x (SDNBM), X (MZFC).

Bolla orsines (Godm. & Sal. 1896). COL i (BMNH); LSA vi (AMNH), ix (MZFC).

Bolla guerra Evans 1953. COL vi,xii (AMNH).

Bolla eusebius (Plötz 1884). El Jabali viii (UCR); PLAT vi (ADW).

Bolla evippe (Godm. & Sal. 1896). PLAT vi (ADW); SUCH X (MZFC, ADW).

Bolla clytius (Godm. & Sal. 1897). COL (USNM).

Bolla litus (Dyar 1912). "COL" (CMNH); COL, 5 mi SW vii; LSA vi (AMNH), ix (MZFC, SDNBM).

Staphylus tierra Evans 1953. AD iv (MZFC); CHAN i (ADW); "COL" (CMNH); COL ii–iv,xii (AMNH), xii (BMNH); El Jabali viii (UCR); ESA i; PA xii; PACA i; PENU i; PLAT iii,iv,vi,ix; PORO xii (ADW); Quesería X (MZFC); SUCH X (SDNBM); Volcán de Colima xii (AMNH).

Staphylus azteca (Scudder 1872). CHAN i (ADW); COL i–v,xii (AMNH), viii (MZFC); COM iii–v (AMNH); ESA i (ADW); PACA i (ADW); Puente Miramar iii (AMNH).

Staphylus iguala (Williams & Bell 1940). COM X (AMNH).

Staphylus vulgata (Möschler, 1878). CHAN i (ADW); COL iii (AMNH).

• ***Staphylus tepeca*** (Bell 1942). "COL" iii (AMNH).

***Staphylus* sp. undescribed. CHAN i; PORO xii (ADW); MZO i (USNM).**

Gorgythion begga pyralina (Möschler 1876). AD vi (ADW); BAG i (MZFC); CHAN i; ESA i; PENU i (ADW); PLAT iii,iv,ix (MZFC), vi; PORO xii (ADW); TAM ix (MZFC).

Zera hyacinthinus (Mab. 1877). COL ii,xii (AMNH), X (SDNBM).

Quadrus cerialis (Stoll [1782]). San Francisco i (AMNH).

Quadrus lugubris (R. Feld. 1869). CHAN i (ADW); COL i–iv; COM X (AMNH); PLAT vi (ADW).

Sotrostra nordica Evans 1953. COL i (AMNH); PLAT i (MZFC).

Paches polla (Mab. 1888). ESA i (ADW); SUCH X (MZFC).

Atarnes sallaei (C. Feld. & R. Feld. [1867]). AD xii (MZFC); CHAN i (ADW); "COL" (CMNH); COL i,iv (AMNH), v (BMNH); ESA i; PACA i (ADW).

Carrhenes canescens canescens (R. Feld. 1869). COL i–iv (AMNH); PENU i (ADW).

Carrhenes fuscescens (Mab. 1891). AD vi (ADW); "COL" (CMNH); LSA v,vii,viii (AMNH).

• ***Zobera albopunctata*** H. A. Freeman, 1970. LSA [Type Locality] vi (AMNH), ix (MZFC).

Mylon lassia (Hewit. [1868]). COL i (BMNH); San Gerónimo xi (AMNH).

Mylon pelopidas (Fabr. 1793). AD iv,ix (MZFC); CHAN i (ADW); COL vi (BMNH); Lagunita de Ticuisitán vii; LSA ix (MZFC), v–x (AMNH); PA xii (ADW); TAM viii (MZFC).

Xenophanes tryxus (Stoll [1780]). CHAN i (ADW); COL i (BMNH), iii; OJO ix,xii (MZFC).

Antigonous nearchus (Latr. [1817]). CHAN i; ESA i (ADW); LSA (De la Maza 1987); TAM viii (MZFC).

Antigonous erosus (Hübner [1812]). AD i,iv,ix (MZFC), vi; CHAN i (ADW); COL iii

(MZFC); ii,iv (AMNH), X (SDNHM); COM iv (DMNH); ESA i (ADW); OJO iv (MZFC); PA xii; PACA i; PENU i; PLAT vi (ADW), ix (MZFC); SUCH ix (SDNHM); TAM viii (MZFC).

Antigonus emorsa (R. Feld. 1869). "COL" (AMNH, CMNH); LSA viii (SDNHM).

Antigonus funebris (R. Feld. 1869). AD vi (ADW); "COL" (CMNH); COM v,vi (AMNH); El Jabali viii (UCR); LSA ix (MZFC), v,vi (AMNH); PLAT vi (ADW), ix; Tinajas ix (MZFC).

Systasea pulverulenta (R. Feld. 1869). AD xii; BAG ix (MZFC); "COL" (CMNH); COM iii-v; LSA v (AMNH); PACA i; PERO xii (ADW); Tinajas ix (MZFC).

Zopyrion sandace Godm. & Sal. 1896. AD ix (MZFC), vi; CHAN i (ADW); "COL" (CMNH); ESA i (ADW); LSA v,vi (AMNH), viii (SDNHM); PA xii; PACA i; PENU i; PLAT vi (ADW); TECL vii (SDNHM).

• *Aethilla lavochrea* Butl. 1872. "COL" (AMNH).

Achlyodes busirus heros Ehrn. 1909. LSA xi (AMNH).

Achlyodes selva Evans 1953. COSU vi,vi,ix (MZFC), X (SDNHM); COL v,xii (AMNH).

Eantis tamenund (W. H. Edw. [1871]). AD i,xii (MZFC); CHAN i; ESA i (ADW); LSA ix (MZFC); MZO xii (USNM); TAM viii (MZFC).

Grais stigmaticus stigmaticus (Mab. 1883). "COL" (CMNH); PENU i (ADW).

Timochares trifasciata trifasciata (Hewit. 1868). AD xii (MZFC); "COL" (CMNH); LSA ix (MZFC); MZO i (ADW).

Timochares ruptifasciata ruptifasciata (Plötz 1884). LSA ix (MZFC); MZO xi-xii (Comstock 1953).

Anastrus sempiternus sempiternus (Butl. & Druce, 1872). COL iii (MZFC); viii (AMNH); COM viii (AMNH).

Anastrus robigus (Plötz 1884). CHAN i (ADW); "COL" (CMNH); ESA i; PA xii; PACA i; PENU i (ADW).

Ebrietas anacreon (Stand. 1876). CHAN i (ADW); "COL" (CMNH); COM iv (AMNH).

Cycloglypha thrasibus (Fabr. 1793). "COL" (CMNH); COL iii (MZFC); El Jabali viii (UCR); ESA i (ADW); TAM iii (MZFC).

Chiomara mithrax (Möschler 1878). AD ix (MZFC); COL vii; COM viii (AMNH).

Chiomara georgina (Reak. 1868). AD iv; Laguna Amela, TECM vii; LSA ix; OJO v,vii (MZFC); PERO xii (ADW); TAM viii (MZFC).

Gesta invisus (Butl. & Druce 1872). AD i,xii (MZFC); Arteaga xii (AMNH); CHAN i (ADW); COL i,ii,iv (AMNH); ESA i (ADW); LSA vii,xii (MZFC); MZO v (AMNH), xii; PA xii; PACA i; PENU i (ADW); PLAT iii (MZFC); PERO xii (ADW); SUCH X (SDNHM).

Erynnis funeralis (Scudder & Burgess 1870). Clarión Is., RI ii-v (CAS), XII (BMNH); COL v (AMNH); COSU X (SDNHM); LSA v (AMNH).

Erynnis scudderii (Skinner 1914). "COL" xii (AMNH).

Erynnis juvenalis clitus (W. H. Edw. 1883). "COL" (Freeman unpublished).

Erynnis tristis tatus (W. H. Edw. 1883). "COL" xii (AMNH).

Pyrgus albescens Plötz 1884. "COL" (CMNH); COL iv (BMNH), viii (MZFC); El Jabali viii (UCR); Laguna las Cuatas vii (SDNHM); MZO i (ADW), v (AMNH); PA xii (ADW).

Pyrgus adepta Plötz 1884. MZO (AMNH).

Pyrgus oileus (L. 1767). AD vi (ADW), i,iv,xii (MZFC); CHAN i (ADW); "COL" (CMNH); COL iii,vii (MZFC), ii,iv,v,ix (AMNH); ESA i; MZO i (ADW), v (AMNH); PA xii; PENU i (ADW); PLAT i,iii,iv,ix,xii (MZFC); PERO xii; PACA i (ADW); SUCH X (SDNHM).

Pyrgus philetas W. H. Edw. 1881. MZO v (AMNH).

Helioptetes domicella domicella (Erichson 1848). CHAN i (ADW); PLAT iv (MZFC).

Helioptetes macaira (Reak. [1867]). AD ix (MZFC); CHAN i (ADW); "COL" (CMNH); COL iii,v (AMNH), vii (BMNH); COM iv (AMNH); ESA i (ADW); Laguna Amela, MZO I; PA xii; PACA i; PENU i (ADW); PLAT iv (MZFC); PERO xii; (ADW); TECM vii (MZFC).

Helioptetes laviana laviana (Hewit. [1868]). CHAN i (ADW); COL iii (MZFC), iii,v (AMNH); ESA i; PA xii; PACA i (ADW); TAM X (MZFC).

Helioptetes arsalte (L. 1758). CHAN i (ADW); COL ii,iv (AMNH); Laguna Amela, TECM vii (MZFC); PA xii (ADW).

Helioptetes alana (Reak. 1868). CHAN i (ADW); COL iii (AMNH); ESA i (ADW); PLAT ix; Río Comala, COM i (MZFC).

• ***Pholisor catullus*** (Fabr. 1793). "COL" (CMNH).

Piruna penaea (Dyar 1918). COL ix; COM X (AMNH); LSA ix (ADW, SDNMH).

Pirunaaeaaea (Dyar 1912). "COL" (AME); LSA viii,ix (AMNH).

Piruna aijicensis H. A. Freeman 1970. El Jabali viii (UCR).

***Piruna* sp. undescribed. COSU vii (MZFC), X (SDNMH); COM viii (AMNH).**

Dardarina dardaris (Hewit. 1877). AD ix (MZFC); COL i (BMNH); LSA vii,viii,x (AMNH), ix (MZFC).

Dalla bubobon (Dyar 1921). El Jabali viii (UCR).

Dalla faula (Godm. 1900). El Jabali viii (UCR); LSA vii (AMNH); PLAT ix (MZFC).

Dalla dividuum (Dyar 1913). El Jabali viii (UCR); LSA v,vi,ix (AMNH), ix (SDNMH), ix; PLAT ix (MZFC), vi (ADW).

Synapte syraces (Godm. 1901). AD iv (MZFC), vi (ADW); COL vii,viii,xii; COM xii (AMNH); PACA i (ADW); PLAT iv (MZFC); SUCH X (SDNMH); Volcán de Colima xii (AMNH).

Synapte shiva Evans 1955. COSU ix (MZFC); COL ix; COM vii,viii,x (AMNH); El Jabali viii (UCR); PLAT xii (MZFC).

Synapte pecta Evans 1955. ESA i; MZO i; PA xii; PACA i; PENU i; PORO xii (ADW).

Zariaspes mytheus (Godm. 1900). AD iv; CAL i (MZFC); CHAN i (ADW); COL ii,iii; COM viii,x,xi (AMNH); ESA i (ADW); LSA xi (AMNH); MZO i (USNM); PA xii; PACA i; PENU i; PORO xii (ADW).

Anthoptus insignis (Plötz 1882). COL i,iii; COM iii,viii (AMNH); El Jabali viii (UCR); PLAT xii (MZFC).

Corticea corticea (Plötz 1883). CHAN i (ADW); "COL" (CMNH); COL i-iii,xii (AMNH), ix (MZFC), X (SDNMH, USNM); COM iii,vii; El Cintinella iii (AMNH); El Jabali viii (UCR); ESA i (ADW); MZO i (USNM), xii; PA xii; PACA i; PENU i (ADW).

Callimormus saturnus (Herr.-Sch. 1869). AD iv (MZFC); "COL" (CMNH); COL i,ii,iv,v,viii (AMNH), i,iii (BMNH), X (SDNMH); ESA i; MZO xii; PACA i (ADW).

Eprius veleda (Godm. [1901]). COM X (AMNH).

• ***Mnasicles hicetaon*** Godman 1901. COL i,iii (AMNH).

Methionopsis ina (Plötz 1882). AD ix,xii (MZFC); CHAN i (ADW); COL i-iii,v,xii (AMNH), iii (MZFC), ix,xii (USNM); COM iii,ix,xi (AMNH); ESA i; PACA i; PENU i (ADW); PLAT xii (MZFC).

Repens florus (Godm. 1900). COM viii,x (AMNH).

Phanes aletes (Geyer [1832]). COL ii (AMNH).

Vidius perigenes (Godm. 1900). AD iv (MZFC), vi (ADW).

Monca tyrtaeus (Plötz 1883). COL i,ii,iv (AMNH), ix (USNM); MZO xii; PACA i (ADW).

Nastra julia (H. A. Freeman 1945). COL X (SDNMH).

• ***Nastra hoffmanni*** (Bell 1947). COL [Type Locality] iii,vi (AMNH). The status of this taxon is uncertain.

Cymaenes trebius (Mab. 1891). COL i-iv (AMNH), iv,vi (USNM), X (SDNMH); COM iv (AMNH); ESA I; MZO xii (ADW); PLAT xii (MZFC).

Vehilius inca (Scudder 1872). "COL" (CMNH); COL iii,xii; COM viii (AMNH); MZO i (USNM), xii (ADW); Volcán de Colima xii (AMNH).

Vehilius illudens (Mab. 1891). COL i-iii (AMNH).

Mnasilus allubita (Butl. 1877). COL ii (AMNH).

Remella remus (Fabr. 1798). COL iii; COM iv,x,xi (AMNH); ESA i (ADW); MZO i (USNM); PACA I; PENU i (ADW).

Remella rita (Evans 1955). COL iii (AMNH); El Jabali i (RES).

Remella duena Evans 1955. COL i (AMNH); El Jabali viii (UCR).

• ***Moeris stroma*** Evans 1955. COM ix,x (AMNH).

Lerema accius (J. E. Smith 1797). AD iv (MZFC); CHAN i (ADW); "COL" (CMNH);

COL i–iv (AMNH), X (SDNHM); COM X (AMNH); ESA i; MZO i,xii (ADW), xii (USNM); PA xii; PENU I; PORO xii (ADW); Río América, COM xii (AMNH); SUCH X (SDNHM).

Lerema liris Evans 1955. "COL" (CMNH); COM vii (AMNH).

Morys valda Evans 1955. AD iv (MZFC); COM viii (AMNH).

Morys micythus (Godm. 1900). COM X (Freeman unpublished).

Vettius fantasos (Stoll [1780]). COL ix (USNM); ESA i (ADW); MZO i (ADW, USNM); PA xii; PACA I; PENU i PLAT vi (ADW).

• *Tromba xanthura* (Godm. 1901). COM iii,viii,x (AMNH); MZO xii (ADW); OJO v,vi (MZFC).

Carystoides abrahami H. A. Freeman, 1969. COL i (AMNH), ii (USNM).

Perichares philetis adela (Hewit. [1867]). "COL" (CMNH); COL ii,iv,v,xii (AMNH), iv,v (MZFC); PA xii; PORO xii (ADW).

Lycas argentea (Hewit. [1866]). COM x,xi (AMNH).

Quinta cannae (Herr.-Sch. 1869). COL iii,iv,xii; COM v (AMNH).

Rhithron osca (Plötz 1883). COM viii; MZO xi (AMNH).

Conga chydaea (Butl. 1877). COM viii (AMNH); MZO i (ADW).

• *Decinea mustea* H. A. Freeman, 1979. PORO xii (ADW).

Ancylloxypha arene (W. H. Edw. [1871]). AD vi (ADW); "COL" (CMNH); COL (Godman & Salvin, 1887–1901), v (AMNH), iii (MZFC); El Jabali viii (UCR); ESA i (ADW); PLAT i,iii (MZFC).

Copaeodes minima (W. H. Edw. 1870). COL iii (BMNH), v (AMNH); El Jabali viii (UCR); MZO xii (ADW).

Hylephila phyleus phyleus (Drury [1773]). COL iv,xii (AMNH), viii (MZFC); MZO i (ADW).

Polites vibex praeceps (Scudder 1872). COL i,iii (AMNH); El Jabali viii (UCR); ESA i (ADW).

Polites pupillus (Plötz 1883). "COL" (Burns 1994).

Polites subreticulata (Plötz 1883). "COL" (Burns 1994).

Pseudocopaeodes eunus chromis (Skinner 1919). "COL" [Type locality] (Skinner 1919).

Wallengrenia otho otho (J. E. Smith 1797). Alvarez i (AMNH); COL iii; COM iv, (Freeman unpublished); MZO i (ADW).

Pompeius pompeius (Latr. [1824]). CHAN i (ADW); "COL" (CMNH); COL i–iii,xii (AMNH), v (USNM), viii (MZFC), X (SDNHM); COL, 5 mi SW vii (AMNH); El Jabali viii (UCR); ESA i; MZO i (ADW), viii (UCR), xii (USNM); PA xii; PLAT vi (ADW).

Anatrytone mazai (H. A. Freeman 1969). LSA ix (AMNH).

Ochlodes samenta Dyar 1914. El Jabali viii (UCR); LSA viii (AMNH).

Poanes zabulon (Boisd. & LeC. [1837]). El Jabali viii (UCR); ETE vi (ADW).

Poanes inimica (Butl. & Druce 1872). El Cobano i (RES).

"*Poanes*" *benito* H. A. Freeman 1979. BAG X (MZFC).

Quasimellana aurora (Bell 1942). El Jabali viii (UCR); LSA iv (USNM).

Quasimellana balsa (Bell 1942). El Jabali viii (UCR); LSA v,viii (AMNH).

Quasimellana eulogius (Plötz 1883). CAL i (MZFC).

Quasimellana agnesae (Bell 1959). MZO xii (USNM).

Quasimellana mulleri (Bell 1942). COM iii; LSA ix (AMNH); SUCH X (MZFC).

Halotus jonaveriorum Burns 1992. El Jabali viii (UCR); PLAT i (MZFC).

Amblyscirtes folia Godm. [1900]. AD ix (MZFC); COM viii (AMNH); El Jabali viii (UCR); LSA vi (AMNH).

Amblyscirtes patriciae (Bell 1959). LSA vi,viii (AMNH); PLAT vi (ADW, CUIC), ix (MZFC) (See Warren 1996).

Amblyscirtes raphaeli H. A. Freeman 1973. PLAT ix (MZFC).

Amblyscirtes fluonia Godm. [1900]. COL vi (AMNH); El Jabali viii (UCR).

Amblyscirtes tolteca tolteca Scudder 1872. AD vi (ADW); COL vi (AMNH); PLAT vi (ADW).

Amblyscirtes fimbriata pallida H. A. Freeman 1993. ETE vi (ADW).

Lerdeara arabus (W. H. Edw. 1882). COL iii; COM iv (AMNH).

Calpodes ethlius (Stoll [1782]). COL viii (USNM), X (SDNHM).

Panoquina errans (Skinner 1892). MZO xii (ADW).

Panoquina ocola (W. H. Edw. 1863). AD ix (MZFC); "COL" (CMNH); COL i,ii,vii (AMNH), vi (USNM), X (SDNHM); ESA i (ADW); OJO X (AMNH); PA xii (ADW).

Panoquina hecebolus (Scudder 1872). El Jabali viii (UCR).

Panoquina leucas (Fab. 1793). "COL" (Freeman unpublished).

Panoquina evansi (H. A. Freeman 1946). COL ii; LSA ix (AMNH); MZO i (ADW); OJO iv,ix (MZFC).

Nyctelius nyctelius nyctelius (Latr. [1824]). "COL" (CMNH); COL vii,x (SDNHM).

Thespies macareus (Herr.-Sch. 1869). Rancho San Antonio xi (SDNHM).

Thespies dalman (Latr. [1824]). LSA v (AMNH). The subspecific name *guerreronis* Dyar, 1913 is apparently a synonym of *dalman*.

Vacerra litana (Hewit. [1866]). "COL" (CMNH). *Vacerra aeas* (Plotz 1882) as cited in the Jalisco list (Vargas et al. 1996) is apparently a synonym of *litana*.

Vacerra gayra (Dyar 1918). PLAT ix (MZFC).

Niconiades incomptus Austin 1997. COL ii (AMNH).

Aides dysoni Godm. 1900. MZO xii (USNM); PA xii (ADW).

Saliana esperi Evans 1955. "COL" (Freeman unpublished).

Saliana longirostris (Sepp 1840). COL ii (AMNH).

Thracides phidon (Cr. [1779]). COM ix (AMNH).

Agathymus rethon (Dyar 1913). COL iii (AMNH).

PAPILIONIDAE (29 SPECIES)

Baronia brevicornis brevicornis Sal. 1893. Armería (De la Maza 1987); LSA v,vi (ex-CLGC); Santiago (Beutelspacher 1984); TAM vi (exCLGC).

Battus philenor philenor (L. 1771). COL (Spade, Hamilton & Brown 1988), v,xi (SDNHM), viii (CIB); ETE vi (MZFC); MAD iv,vi,vii (SDNHM); MZO ix (AME); OJO viii; PLAT iv,vi,xii (MZFC); TECL viii (SDNHM).

Battus philenor orsua (Godm. & Sal. 1889). Clarión Is., RI (Brown 1990, CIB: Vázquez 1956), xii (Rothschild & Jordan 1906).

Battus polydamas polydamas (L. 1758). AD i,iv,vi–xii (MZFC); Armeria Bridge ix (CAS); CAL X (SDNHM); CHAN i (ADW, MZFC); COSU (Spade, Hamilton & Brown 1988); COL (AMNH), i–iii,x,xii (SDNHM); ESA i (ADW, MZFC); Guatimoc (AMNH); LSA vi,viii (AME, De la Maza 1987); MZO (Beutelspacher 1984), i,xii (ADW, LACM), ix (AME), xii (CIB); PA xii; PACA i (ADW, MZFC); PLAT i,iv,vi,xii; PORO xii (MZFC).

Battus laodamas iopas (Godm. & Sal. 1897). AD iv,viii–xi (MZFC); Armeria Bridge ix (CAS); COL iv,v,x (SDNHM), vi (AME); COM vi (AME); Coquimatlán viii (CIB); LSA (Beutelspacher 1984), viii (CIB); MAD v (SDNHM, De la Maza 1987); PLAT iv,ix,x,xii (MZFC); TAM ix (CIB).

Battus eracon (Godm. & Sal. 1897). AD ii,iv,vi,viii–x,xii (MZFC); Cerro de la Vieja, nr. Coquimatlán (Spade, Hamilton & Brown 1988); COL iii (SDNHM, D'Almeida 1966), viii (CIB); COM vi (AME, Tyler 1975); MAD xi (SDNHM, De la Maza 1987); MZO ix (AME); PA xii; PENU i; PLAT iv (MZFC); Santiago X (CIB); TAM ix–xi (SDNHM), X (exCLGC); Tepames (Spade, Hamilton & Brown 1988).

Parides photinus photinus (Doubleday 1844). AD iv,vi,ix,x,xii (MZFC); Alvarez iii,xii (AMNH); CAL ix,x (SDNHM); CHAN i (MZFC); COSU X (SDNHM); COL (Rothschild & Jordan 1906), iii–vi (SDNHM); COM (De la Maza 1987), vii,x (AME); ESA i (ADW, MZFC); ETE vi (MZFC); MAD viii,xii (SDNHM); MZO (Beutelspacher 1984), xii (AME), i,xii (LACM), v,ix,xii (CIB); PA xii (ADW); PACA i; PENU i (ADW, MZFC); PLAT iv,xii (MZFC).

Parides montezuma montezuma (Westw. 1842). AD i,ii,vi–xi (MZFC); Armeria Bridge ix (CAS); CAL x,x (SDNHM); COSU (Spade, Hamilton & Brown 1988), xi (SDNHM); COL (Beutelspacher 1984), x–xii (AMNH), ix (CIB); ESA i (ADW, MZFC); Lagunas Las Cuatas ix (MZFC, SDNHM); LSA; Los Mezcales ix (Beu-

telspacher 1984); MAD vi,vii (SDNHM); PLAT vii,ix,x (MZFC); PJu ix (SDNHM); TAM vii (exCLGC); TECL vi–ix; Yerbabuena vi (SDNHM).

- *Parides eurimedes mylotes* (Bates 1861)]. Guatimoc-Guatimotzin vii (AMNH).

Parides erithalion trichopus (Rothschild & Jordan 1906). AD i,vi–xii (MZFC); Alvarez iii (AMNH); CAL x,xii; COSU X (SDNHM); COL ii,iv,vii,xi,xii (AMNH); COM (Tyler 1975), vii (AME); LSA (Beutelspacher 1984), X (CIB); MAD v (SDNHM); PLAT v,vii,ix,xii (MZFC); PJu X (SDNHM); San Isidro ix (De la Maza 1980); SUCH ix; TAM x; Tinajas ix; Yerbabuena vi (SDNHM).

Protagrphium epidaeus tepicus (Rothschild & Jordan 1906). AD vi–viii (MZFC); COL (Tyler 1975, Beutelspacher 1984, Jurado 1990, AMNH), ii–v (SDNHM); LSA (Velázquez & Velázquez 1975, Beutelspacher 1984), iv (AME), viii (De la Maza 1987), ix (CIB); MAD iv,v,viii (SDNHM).

Protagrphium philolaus philolaus (Boisd. 1836). AD vi,vii,ix (MZFC); COL (AMNH, Beutelspacher 1984), iv,vii (SDNHM); LSA (Velázquez & Velázquez 1975, Beutelspacher 1984), vi (exCLGC, AME), vii (AMNH), viii (SDNHM); MZO (Godman & Salvin 1878–1901), vii (SDNHM); PA xii (MZFC); Peña Colorada vii; PJu ix; Río Naranjo iv (SDNHM), vii (AMNH); TAM vii (exCLGC), viii; TECL vii,viii (SDNHM).

Protagrphium agesilaus fortis (Rothschild & Jordan 1906). AD viii (MZFC); LSA (Velázquez & Velázquez 1975, Beutelspacher 1984), vi (AME), viii (CIB); MZO xii (AME); PJu ix; TAM vii (exCLGC), viii (SDNHM).

- *Protesilaus macrosilaus penthesilaus* (C. Feld. & R. Feld. 1865)]. “COL” v (AME).

Mimoidea thymbraeus aconophos (Gray [1853]). AD ii,vi,viii,ix (MZFC); LSA (Velázquez & Velázquez 1975, Beutelspacher 1984), v (AME); PLAT iv,x (MZFC); TAM vii (exCLGC).

Mimoidea ilus occiduus (Vázquez 1957). AD viii (MZFC); COL (CIPN: Vázquez 1956); LSA (Velázquez & Velázquez 1975, Beutelspacher 1984), viii (SDNHM).

Priamides pharnaces (Doubleday 1846). AD ix,x (MZFC); COL (AMNH), i–iv,x (SDNHM), vi (AME); LSA (Velázquez & Velázquez 1975, Beutelspacher 1984); MAD v (SDNHM); MZO i (LACM); PLAT iv,vii,viii,x (MZFC).

Priamides erostratus vazquezae (Beutelspacher 1986). LSA (Beutelspacher 1984), viii (AME); PLAT viii (MZFC).

Priamides anchisiades idaeus (Fabr. 1793). AD X (MZFC); Armeria Bridge ix (CAS); LSA (Velázquez & Velázquez 1975, Beutelspacher 1984); OJO xi; PA xii (MZFC); PACA i (ADW); PLAT x,xii (MZFC); TAM ix (CIB).

Troilides torquatus mazai (Beutelspacher 1974). “COL” (Tyler 1975, Beutelspacher 1984).

Calaides ornythion ssp. AD vi,vii (MZFC); COM (CIB); LSA (Beutelspacher 1984).

Calaides astyalus bajaensis (Brown & Faulkner 1992). COL (AMNH), vi,vii (SDNHM); LSA (Velázquez & Velázquez 1975), vi (exCLGC), ix (SDNHM); MAD v; TECL vii,viii (SDNHM).

Calaides androgeus ssp. AD vi (ADW), vii,ix,x (MZFC); COM (De la Maza 1987); LSA (Velázquez & Velázquez 1975, Beutelspacher 1984), v (exCLGC), viii (SDNHM), viii (CIB), ix (Velázquez 1976); Los Mezcales ix (CIB).

Heraclides thoas autocles (Rothschild & Jordan 1906). AD vi–xi (MZFC); COL (AMNH), ii,iv,vii,x (SDNHM); COM vii; Coquimatlán viii (SDNHM); LSA viii (SDNHM, Velázquez & Velázquez 1975, Beutelspacher 1984); MAD iv (SDNHM); MZO (Beutelspacher 1984), xii (CIB); OJO xii (SDNHM); PLAT ix (MZFC); TAM viii; TECL viii (SDNHM).

Heraclides cresphontes (Cr. 1777). AD vi,vii,ix,x,xii (MZFC); Armeria Bridge ix (CAS); COL (AMNH), ii–viii,x (SDNHM), vii,viii (MZFC); LSA (Velázquez & Velázquez 1975, Beutelspacher 1984); MAD iv (SDNHM); PA xii (ADW); PLAT X (MZFC); TAM vii (exCLGC), viii (SDNHM).

Papilio polyxenes asterius Stoll 1782. AD xi (MZFC); COL x,xi (SDNHM); LSA (AMNH, Velázquez & Velázquez 1975), viii (CIB, SDNHM); PLAT vii,ix,x,xii (MZFC); TAM vii (exCLGC); Quesería x; TECL vii (SDNHM).

Pterourus pilumnus (Boisd. 1836). COM (De la Maza 1987).

Pterourus multicaudatus (Kirby 1884). PLAT x,xii (MZFC).

Pyrrhosticta garamas garamas (Geyer [1829]). COSU iii,vii,viii,x; SUCH vii (SDNHM).

Pyrrhosticta victorinus morelius (Rothschild & Jordan 1906). COL (Beutelspacher 1984), ii-viii,x,xi (SDNHM); COM iv; LSA iv (AME); Tepames X (SDNHM).

PIERIDAE (34 SPECIES)

Enantia mazai diazi Llorente 1984. COSU x-xii; COL xi (SDNHM); PLAT X (MZFC); Quesería X (SDNHM).

Dismorphia amphiona lupita Lamas 1979. COL (AMNH); PLAT iv,ix,xii (MZFC); Quer-sería x; SUCH X (SDNHM).

Zerene cesonia cesonia (Stoll 1791). AD i,vii-xii (MZFC); COL ix (AME), X (SDNHM); COL, 7 mi SW vii (AMNH); COL-Coquimatlán ix (CIB); COL-Tonila ix (CIB); Coquimatlán ix (CIB); Esperanza X (USNM); LSA vi (exCLGC), ix (SDNHM), X (Beutelspacher & Brailovsky 1979); PLAT i,ii,ix,x,xii (MZFC); Tonila ix (CIB).

Anteos clorinde nivifera (Frühstorfer 1907). AD i,iv,vi-ix,xii (MZFC); CHAN i (ADW); COL ii,vii (SDNHM), ix (AME); LSA vii (AMNH); MZO ix (AME), viii (CIB); PA xii (ADW); PENU I; Perian ix (CIB); PLAT iv,vi,xii (MZFC).

Anteos maerula lacordairei (Boisd. 1836). AD iv,vi-ix,xii (MZFC); Bahía Santiago; COL (AMNH), ii,x,x,xi (SDNHM), ix (AME); LSA (AMNH); MAD viii; MZO i (LACM), viii (SDNHM); PA xii (ADW); PACA i (MZFC); PENU i (ADW); PLAT i,iv,vi (MZFC); PORO xii (ADW).

Phoebeis agarithe agarithe (Boisd. 1836). AD vi,vii,ix (MZFC); Bahía Braithwaite, Socorro Is. RI iv (SDNHM: Brown 1990); CHAN i (ADW); COL (AMNH), ii,iv,vii,x,xii (SDNHM), X (CIB); COM X (CIB); ESA i (ADW, MZFC); LSA v (SDNHM); MZO (AMNH), ii (CIB), ix (AME), xii (CIB, LACM); MZO, 5 mi SW (AMNH); PA xii; PACA i; PENU i (ADW, MZFC); PLAT ix (MZFC); Socorro Is., RI vii,viii,ix,xii (CIB).

Phoebeis argante argante (Fabr. 1775). AD vii,ix,x (MZFC); COL (AMNH); PLAT i,vi,vii,ix,xii (MZFC).

Phoebeis neocyparis virgo (Butl. 1870). AD vi,vii,ix (MZFC); COL ix (CIB); COSU ix,xii (SDNHM); LSA vii (AME); PLAT i,iv,vi,vii,ix (MZFC).

Phoebeis philea philea (L. 1763). AD vi-xii (MZFC); Camino COL-Tonila ix (CIB); CHAN i (ADW, MZFC); COL v,vi (LACM), vii,viii,x,xi (SDNHM); ESA i (ADW, MZFC); MZO vii,xii (LACM), i (ADW); PA xii (ADW, MZFC); PACA i (MZFC); PENU i; PLAT iv,vi,vii,xii (MZFC); TAM (exCLGC).

Phoebeis sennae marcellina (Cr. 1777). AD i,iv,vi-ix,x (MZFC); Bahía Braithwaite, Socorro Is., RI iv (SDNHM: Brown 1990); CHAN i (ADW, MZFC); COL ii,vii,ix,xii (SDNHM); COM X (CIB); Coquimatlán ix (CIB); ESA i (ADW, MZFC); LSA (AMNH); MAD v (SDNHM); MZO i (ADW), ix (AME), xii (CIB, LACM); PA xii (ADW, MZFC); PACA i (ADW); PENU i (ADW, MZFC); Perian ix (CIB); PLAT i,ii,iv,vi-x,xii (MZFC); PORO xii (ADW, MZFC); TECL vii,ix (SDNHM); TECM (AMNH); Tonila ix (CIB).

Rhabdodryas trite trite (L. 1758). PA xii (MZFC).

Aphrissa statira jada (Butl. 1870). AD iv,vii-ix (MZFC); CHAN i (ADW); LSA iv (AME); PLAT iv,xi (MZFC); PA xii (ADW, MZFC); PACA i (ADW).

Abaeis nicippe (Cr. 1780). AD ii,vii,ix (MZFC); CHAN i (ADW, MZFC); COL x,xii (SDNHM); COL, 5 mi SW; MZO (AMNH); PA xii; PLAT ii,xii (MZFC); PNU x; Río Naranjo iv (SDNHM).

Pyrisitia dina westwoodi (Boisd. 1836). AD i,ii,iv,vi-xii (MZFC); CHAN i (ADW, MZFC); COL ii,iii,x; COM ix (SDNHM); LSA vii (AMNH); OJO ix (SDNHM); PACA i; PLAT i,ii,iv,vi,vii-x,xii (MZFC).

Pyrisitia lisa centralis (Herr.-Sch. 1864). AD vi (MZFC); COL-Coquimatlán ix (CIB); ESA i (ADW, MZFC); MAD ix; MZO viii (SDNHM), ix (AME); PA xii; PLAT vi (MZFC); TECM, 3 mi E viii (AMNH).

Pyrisitia nise nelphe (R. Feld. 1869). AD i,vi-xi (MZFC); COL (CIB, AMNH),

i,ii,iv,v,ix-xii; COM ix,x (SDNHM); ESA i (ADW); Esperanza X (USNM); LSA (AMNH); MAD ix (SDNHM); MZO ii (CIB); PLAT ii,iv,vii,ix,x (MZFC).

Pyrisitia proterpia proterpia (Fabr. 1775). AD vii-xii (MZFC); Armería ix (CIB); COL (AMNH), i,viii (CIB), x,xi (SDNHM); COL, 5 mi SW (AMNH); COL-Tonila ix (CIB); COM X (CIB); El Mezquite viii (CIB); ESA i; LSA X (CIB); PENU i (ADW, MZFC); PLAT i,iv,vi,vii,ix-xii (MZFC); TECM, 3 mi E (AMNH); Tonila ix (CIB).

Eurema albula celata (R. Feld. 1869). COL (AMNH); PLAT i,iv,vi,viii-xii (MZFC).

Eurema boisduvaliana (C. Feld. & R. Feld. 1865). AD i,ii,vi-xii (MZFC); CHAN i (ADW, MZFC); COSU xii (SDNHM); COL (AMNH), iv,x,xi (SDNHM), ix (AME); COL-Coquimatlán ix (CIB); COL-Tonila ix (CIB); COM ix,x (SDNHM); ESA i (ADW, MZFC); Hacienda San Antonio xi; Laguna Las Cuatas ix (SDNHM); Los Mezcales ix (CIB); LSA X (CIB); MZO (AMNH), xii (CIB); OJO ix (SDNHM); PA xii; PACA i; PENU i (ADW, MZFC); PLAT i,ii,iv,vi,vii,ix,x,xii (MZFC); PORO xii (ADW, MZFC); PJU ix (SDNHM); Rancho San Antonio ix (SDNHM).

Eurema daira (Godart 1819). AD i,ii,iv,vi-x,xii (MZFC); CHAN i (ADW, MZFC); COL (AMNH), i,ii,iv,vii-xii (SDNHM), ii,viii,xii (CIB); COL, 5 mi SW (AMNH); COM ix,xi,x (CIB); Cóbano X (SDNHM); ESA i (ADW, MZFC); El Mezquite viii (CIB); ETE vi (MZFC); Las Conchas, Ixtlahuacán vii (SDNHM); MAD X (CIB); MZO (AMNH), i (ADW), xii (CIB); Nevado de Colima viii (SDNHM); PA xii; PACA i; PENU i (ADW, MZFC); PLAT i,ii,iv-viii,x-xii (MZFC); PORO xii (ADW, MZFC); Quesería xii (SDNHM); SE slope Volcán de Colima, pine zone xii (CAS).

Eurema mexicana mexicana (Boisd. 1836). AD vii-ix; ESA i; LSA X (CIB); PLAT i,ii,iv,vii-x (MZFC); PJU ix; SUCH X (SDNHM).

Eurema salome jamapa (Reak. 1866). COSU xii (SDNHM); COL (AMNH), xi (SDNHM); PLAT ii,iv,ix,x,xii (MZFC).

Nathalis iole iole Boisd. 1836. AD iv,vii,xii (MZFC); Bahía Santiago (AMNH); PLAT iv,x (MZFC).

Kricogonia lyside (Godart 1869). COL iv (AMNH), viii (AME); LSA X (CIB); PLAT xii (MZFC).

Hesperocharis costaricensis pasion (Reak. [1867]). AD xii; PLAT i,ii,xii (MZFC).

Catasticta flisa flisa (Herr.-Sch. [1853]). COL xi; El Jabalf (De la Maza 1987).

Pereute charops leonilae Llorente 1986. COSU i,xii; COL xi (SDNHM); Laguna de Carrizalillo xii; PLAT iv,xii (MZFC); Rancho San Antonio xi (SDNHM).

Melete lycimnia isandra (Boisd. 1836). AD i,ii,ix-xii (MZFC); COL i (AMNH), xiii (CIB); LSA (De la Maza 1987), vi (exCLGC); MZO ix (AME); PLAT vii; PORO xii (MZFC); TECM (De la Maza 1987).

Glutophrissa drusilla tenuis Lamas 1981. AD viii-xii (MZFC); CHAN i (ADW, MZFC); COL vii (CIB), ix (AME); COM X (CIB); ESA i (ADW, MZFC); Ixtlahuacán xi (ex-CLGC); Los Mezcales ix (CIB); LSA X (CIB); MZO i (LACM), viii (CIB), xi (AME), xii (CIB, AMNH); PA xii; PACA i; PENU i (ADW, MZFC); PLAT vii,xii; PORO xii (MZFC).

Pontia protodice (Boisd. & LeC. 1829). COL V (AMNH).

Leptophobia aripa elodia (Boisd. 1836). AD xi; COSU xii; COL xi; PLAT xi,xii (MZFC).

Pieriballia viardi laogore (Godm. & Sal. 1889). AD x,xi (MZFC); Bahía Santiago xi (AMNH); CAL i (SDNHM); CHAN i (ADW, MZFC); COM vi (AME); ESA i (ADW, MZFC); LSA v (AME); MAD i,iv (SDNHM); MZO vi,xii (CIB), xi,xii (LACM); PA xii (MZFC); PACA i; PENU i (ADW, MZFC); PLAT i,iv,xii (MZFC); PORO xii (ADW, MZFC).

Ascia monuste monuste (L. 1764). AD vii-x,xii (MZFC); CHAN i (ADW, MZFC); COL (CMNH), viii (CIB), xi (exCLGC), ii,iv,vii,viii,x,xi (SDNHM); COL-Coquimatlán viii (CIB); COM X (CIB); ESA i (ADW, MZFC); LSA vi (exCLGC), vii; MZO i,ii,xii (CIB), v (AMNH), viii (SDNHM), ix (AME), xi (Comstock 1954), xii (LACM); PA xii; PACA i (ADW, MZFC); PENU i (ADW); PLAT vii,xii (MZFC); PORO xii (ADW).

Ganyra josephina josepha (Sal. & Godm. 1868). AD ii,iv,vii-xii (MZFC); Armeria Bridge ix (CAS); CHAN i (ADW, MZFC); COL (AMNH), iv,ix (CIB), v (SDNHM), ix (AME), X (SDNHM), xi (exCLGC); ESA i (ADW, MZFC); LSA (De la Maza 1987), vi (exCLGC), vii (AMNH); MAD iv,ix (SDNHM), X (CIB); MZO i (ADW), ix

(AME), xii (LACM); PA xii; PENU i; PORO xii (ADW, MZFC); PJu ix (SDNBM); PACA i (ADW); TAM vi,vii (exCLGC); Tonila ix (CIB).

NYMPHALIDAE (130 SPECIES)

Dione juno huascuma (Reak. 1866). COL (De la Maza 1987), iv,vi,ix,x,xi,xii (SDNBM); ESA i (ADW, MZFC); MZO (Comstock 1955), i (ADW), xii (LACM); MZO, 13 mi N xii (SDNBM); PACA i; PLAT xii (MZFC).

Dione moneta poeyii Butl. 1873. COL xi,xii; COSU xii (SDNBM); PLAT i,xi (MZFC).

Agraulis vanillae incarnata (Riley 1926). AD vii,x,xi (MZFC); COL iv,v (SDNBM); MZO (De la Maza 1987); PA xii; PLAT ix,x (MZFC).

Dryas iulia moderata (Riley 1926). AD i,ii,iv,ix,x,xi,xii (MZFC); CAL X (SDNBM); CHAN i (ADW, MZFC); COL i,ii,xi (SDNBM); ESA i (ADW); Laguna La María, COM xi (MZFC); MZO (Comstock 1955), i (ADW, LACM), xii (ADW); MZO, 13 mi N xii (SDNBM); PA xii; PACA i; PENU i (ADW, MZFC); PLAT ix,x,xii (MZFC); Poro xii (ADW, MZFC).

Heliconius charithonia vazquezae Comstock & Brown 1950. AD i,iv,vii,ix,xii (MZFC); CHAN i (ADW, MZFC); COL i,xi (MZFC), iv (SDNBM); ESA i (ADW, MZFC); Laguna de Carrizalillo xi (MZFC); MAD v (SDNBM); MZO i (ADW, Comstock 1955), viii (SDNBM), xii (LACM); MZO, 13 mi N i (SDNBM); PA xii; PACA i; PENU i (ADW, MZFC); PLAT i,iv–vii,ix,xii (MZFC); Poro xii (ADW, MZFC).

Heliconius erato punctata Beutelspacher 1992. AD viii,ix (MZFC); MZO i (LACM); PA xii (ADW, MZFC); PACA i (MZFC); Poro xii (ADW, MZFC).

Heliconius hortense Guérin [1844]. BAG xi; COL xi; San Antonio i,x,xi (SDNBM).

Euptoieta hegesia hoffmanni Comstock 1944. AD vi,vii,ix,xi (MZFC); CHAN i (ADW, MZFC); COL iii,x (SDNBM); COL, 15 mi NE, Hwy. 54 xii (LACM); ESA i (MZFC); MZO i (LACM); PA xii; PLAT ii,iv,vii,ix–xi (MZFC); Poro xii (ADW, MZFC).

Vanessa virginiensis (Drury 1773). Rancho San Antonio, COM ix; PLAT i,xi (MZFC).

Nymphalis antiopa antiopa (L. 1758). COSU X (MZFC).

Hypanartia godmani (Bates 1864). PLAT xi (MZFC).

Anartia amathea colima Lamas 1995. AD i,ii,iv,vi–ix,xi,xii (MZFC); Bahía Santiago (AMNH); CAL X (SDNBM); CHAN i (ADW, MZFC); COL (AMNH), i,ii,x (SDNBM), viii (MZFC); ESA i (ADW, MZFC); Huerta El Boliche i (MZFC); LSA (De la Maza 1987); MAD v (SDNBM); MZO xii (LACM, ADW), i (ADW); OJO i (MZFC); PA xii; PACA i; (ADW, MZFC); PLAT i,ii,iv–vii,ix,xii (MZFC); Poro xii (ADW, MZFC); San Francisco (AMNH).

Anartia jatrophae luteipicta Frühstorfer 1907. AD iv,vii–ix,xii (MZFC); CHAN i (ADW, MZFC); COL (AMNH), i–iii,x; MZO viii (SDNBM), xii (ADW, LACM); PA xii; PACA i (MZFC).

Siproeta epaphus epaphus (Latr. [1813]). AD xii; OJO vi; PLAT i,viii–x,xii; Quesería x; SUCH X (MZFC).

Siproeta stelenes biplagiata (Frühstorfer 1907). AD iii,iv,vi–xii (MZFC); CHAN i (ADW, MZFC); COL (AMNH), i,ii,xi (SDNBM); COL, 5 mi SW (AMNH); ESA i (ADW, MZFC); LSA (AMNH); MAD xi (SDNBM); MZO i,xii (LACM); PA xii; PACA i; PENU i (ADW, MZFC); PLAT ii,iv,vi,xii (MZFC); Poro xii (ADW).

Junonia coenia Hübner [1822]. AD i,iv,vi,viii,xii; COL X (MZFC); LSA (De la Maza 1987); Laguna de Ticusitán vii; PLAT i,ii,iv,vi,ix,xii (MZFC).

Junonia genoveva nigrosuffusa Barnes & McDunnough 1916. COSU xi (MZFC); COL xi (SDNBM); El Jabali viii (UCR); ESA i (ADW, MZFC); Estancia X (MZFC); Quesería xii (SDNBM); PLAT xii (MZFC); Tepames X (SDNBM). It is possible that all western Mexican *Junonia*, including coastal *genoveva*, montane *nigrosuffusa*, and *coenia* really only represent one single species.

Chlosyne gloriosa Bauer 1960. AD ix (MZFC); TAM vi (exCLGC).

Chlosyne janais (Drury 1782). TAM ix (SDNBM).

Chlosyne hippodrome hippodrome (Geyer 1837). AD vii–ix,xi; Aguas Cuatas xi (MZFC); COL x; COM ix (SDNBM); El Jabali viii (UCR); PLAT ix–xii (MZFC); Rancho San Antonio ix (SDNBM); Tinajas ix (MZFC).

Chlosyne lacinia crocale (W. H. Edw. 1874). AD ii,vii–xii; Arroyo de Arquisola, Coquimatlán viii (MZFC); CAL X (SDNHM); COL (USNM), vii (MZFC), ix–xi; COM ix,x (SDNHM); Esperanza X (USNM); LSA viii (MZFC); OJO ix (SDNHM), viii,ix; PLAT ii,ix (MZFC); PJu ix (SDNHM); Río Comala, COM X (MZFC); TAM vi,vii (exCLGC); Tepames, 0.9 mi S ix (SDNHM).

Chlosyne marianna Röber [1914]. PLAT ix (MZFC).

Chlosyne marina dryope (Godm. & Sal. 1894). AD vii–ix,xii (MZFC); COL xi; COM ix (SDNHM); LSA vi (exCLGC); PLAT viii–x (MZFC); PJu ix (SDNHM); TAM vi,vii (exCLGC).

Chlosyne riobalsensis Bauer 1961. AD ii,vii,ix (MZFC); COL i (AMNH); PLAT ix (MZFC).

Anemeca ehrenbergii (Geyer [1833]). COSU vi,vii,ix,x (SDNHM); COL (Kendall & McGuire 1984), iv,xi (SDNHM, CMNH); LSA (De la Maza 1987); Quesería xii (SDNHM); Río Naranjo iv (SDNHM); PLAT viii,xii (MZFC).

Thessalia theona ssp. AD ii,iv,vii–xii; Cerro de la Media Luna, Coquimatlán ix; CHAN i (MZFC); COL iv,v,x,xi (exCLGC), iii (SDNHM); LSA vi (exCLGC), ix; MZO viii (SDNHM), xii (ADW); OJO ix (SDNHM); PA xii (ADW); PLAT i,ii,vii–ix,x,xi (MZFC); PJu ix (SDNHM); San Francisco i,xii (AMNH); SUCH X (MZFC); TAM (exCLGC).

Texola anomalus anomalus (Godm. & Sal. 1897). AD vii,ix–xi (MZFC); COL (AMNH); LSA (De la Maza 1987); PLAT vii; TECL vii (MZFC).

Texola elada elada (Hewit. 1868). AD i,vii,ix,xi; COSU xii (MZFC); COL viii; COL, 5 mi SW vii (AMNH); El Jabali viii (UCR); PLAT i,ii,iv,vii–x,xii (MZFC); Quesería xii (SDNHM); SUCH X (MZFC); TAM vi (exCLGC).

Microtia elva elva Bates 1864. AD ii,vii–xii (MZFC); Bahía Santiago; COL, 5 mi SW (AMNH); CHAN I; ESA i (ADW, MZFC); LSA (De la Maza 1987), v (exCLGC); Laguna de Tieuisitán vii; PA xii; PACA I; PLAT i,ii,vii–xii (MZFC); TECM, 3 mi E (AMNH); Tepames, 0.9 mi S ix (SDNHM).

• ***Phyciodes phaon*** (W. H. Edw. 1863). Alvarez i (AMNH); COL iv,v (SDNHM).

Phyciodes pallescens (R. Feld. 1869). AD vii (MZFC); Laguna las Cuatas vii (SDNHM); MZO i (ADW).

Phyciodes vesta vesta (W. H. Edw. 1869). PLAT i,iv,vii (MZFC).

Anthanassa alexon alexon (Godm. & Sal. 1889). AD i,xi,xii; COSU vii; PLAT i,ii,iv,vii–x,xii; SUCH X (MZFC).

Anthanassa ardys ardys (Hewit. 1864). AD iv,vii; BAG x; COSU vii; PLAT i,ii,iv,vi–ix,xii; SUCH X (MZFC).

Anthanassa sp. AD i; PLAT i; SUCH X (MZFC).

Anthanassa tulcis (Bates 1864). AD i,ii,vii–xi (MZFC); Alvarez i (AMNH); CAL i (MZFC); CHAN i (ADW, MZFC); COSU X (SDNHM); COL (CMNH), i (AMNH), ix (USNM), i,iv,v,xi (SDNHM); ESA i (ADW, MZFC); La Playa, Minatitlán vii (MZFC); Laguna Las Cuatas viii,ix (SDNHM); PA xii; PACA i; PENU i (ADW, MZFC); PLAT ii,vii–xii (MZFC); SUCH X (MZFC).

Anthanassa ptolyca amator (Hall 1929). AD viii,ix,xii; PLAT i,ii,iv,v,ix,x,xii (MZFC).

Anthanassa sitalces cortes (Hall, 1917). PLAT vii (MZFC).

Anthanassa texana texana (W. H. Edw. 1863). Cuyutlán (AMNH).

• ***Tegosa guatemalena*** (Bates 1864). COL X (SDNHM); COM iii,v (CMNH).

Historis odius dious Lamas 1995. AD ii; PLAT vi,ix,x (MZFC).

Smyrna blomfildia datis Frühstorfer 1908. AD i–iv,vi–x,xii (MZFC); CHAN i (ADW, MZFC); COL i–iii,xi; COM iii (SDNHM); ESA i (ADW, MZFC); LSA (De la Maza 1987); MAD v (SDNHM); MZO i (LACM); OJO XII (MZFC); PA xii; PACA i; PENU i (ADW, MZFC); PLAT ii,iv,vi,ix,x,xii (MZFC); PORO xii (ADW); PJu X (SDNHM); TAM viii (SDNHM); SE slope Volcán de Colima xii (CAS).

Smyrna karwinskii Geyer [1833]. AD viii–x; MAD i; PLAT vi,xii (MZFC); PJu X (SDNHM).

Colobura dirce dirce (L. 1758). AD i,iii,viii,ix,xii (MZFC); CHAN i (ADW, MZFC); COL ii (SDNHM); ESA i (ADW, MZFC); MAD (De la Maza 1987); MZO xii (LACM); OJO xii (MZFC); PA xii; PACA I; PENU i (ADW, MZFC); PLAT iv,v,viii–x,xii (MZFC).

Biblis hyperia aganisa Boisd. 1836. AD i,iv,x,xii; CAL X (MZFC); CHAN i (ADW,

MZFC); COL (AMNH), iv,x (SDNHM); ESA i (ADW, MZFC); MAD v (SDNHM); MZO i (LACM); PACA i (ADW, MZFC); PENU i (ADW); PLAT i,iv,viii,ix,xi,xii; PORO xii (MZFC); TAM vii (exCLGC).

Mestra dorcas amyomone (Mén. 1857). AD i,xii (MZFC); COSU X (SDNHM); Las Conchas, Ixtlahuacán vii (MZFC); MZO i (LACM); PLAT vi (MZFC).

Myscelia cyananthe cyananthe C. Feld. & R. Feld. 1867. AD i,ii,iv,vi–xii (MZFC); CHAN i (ADW, MZFC); Coliquinatlán iii (CMNH); Coliaviniatlán (Jenkins 1984); COL (USNM); COM; LSA (Jenkins 1984), vi (exCLGC), viii,ix (SDNHM); MAD v (SDNHM, MZFC); MZO (Jenkins 1984), xi (LACM); OJO iv (SDNHM), v (MZFC); PACA i; PENU i (ADW, MZFC); PLAT i,iv,vi,ix,x,xii (MZFC); PORO xii; TAM vi,vii (exCLGC), viii,ix (SDNHM), viii; TECL viii (SDNHM); Volcanillos xi (MZFC).

Myscelia cyaniris alvaradina R.G. Maza & Díaz 1982. AD iv,vi–ix,xi,xii (MZFC); COL (AMNH); MAD (De la Maza 1987), i,vi,ix (SH: Jenkins 1984), xi (JC: Jenkins 1984); OJO i,xi (MZFC), v (SDNHM); PLAT vi,ix (MZFC).

Myscelia ethusa ethusa (Doyère [1840]). Coquimatlán; LSA; MZO (Jenkins 1984), i,xi (LACM).

Catonephele cortesi R.G. Maza 1982. "COL" (AMNH: Jenkins 1985).

Eunica alcmena alcmena (Doubleday [1847]). AD i (MZFC); COL (Jenkins 1990, AMNH); LSA (Jenkins 1990); TAM vii (exCLGC).

Eunica monima monima (Cr. 1782). AD iv,vi–viii,xi; COL vii (MZFC); Laguna Amela, TECM vii; Laguna La Colorada, COL vii; PLAT vi (ADW), i,iv,vi,xii; TECL vii (MZFC).

Eunica tatila tatila (Herr.-Sch. [1855]). "COL" (AMNH, Jenkins 1990).

Hamadryas amphinome mazai Jenkins 1983. AD iv,viii–x,xii; COL iii (MZFC), ii–v (SDNHM), xi (JC: Jenkins 1983), xi (JC: Jenkins 1983); ESA i (ADW, MZFC); MAD iv (SDNHM); PACA i; PENU i (ADW); PLAT iv,vi,xii (MZFC); TAM viii,ix; TECL vii; Turla X (SDNHM).

Hamadryas atlantis lelaps Godm. & Sal. 1883. AD iii,vi,viii,xii; CAL X (MZFC); CHAN i (ADW); COL (USNM); LSA (Jenkins 1983), vii (MZFC); MAD (Jenkins 1983); PACA i (ADW, MZFC); PENU i; PLAT ii,iv–vi,xii (MZFC).

Hamadryas februa ferentina (Godart [1824]). AD i,ii,iv,vi–ix,xii (MZFC); CAL i (SDNHM), X (MZFC, SDNHM); CHAN i (ADW, MZFC); COL i–v,xi (SDNHM), i,iii (MZFC); ESA i (ADW, MZFC); LSA xi (exCLGC); MAD xii (SDNHM); MZO i (LACM); OJO v,ix (MZFC); PA xii; PACA I; PENU i (ADW, MZFC); PLAT iv,vi (MZFC); PORO xii (ADW, MZFC); San Francisco (Jenkins 1983); TAM ix (SDNHM); TECM (Jenkins 1983).

Hamadryas feronia farinulenta (Frühstorfer 1916). CAL X (SDNHM); MAD iv (SDNHM).

Hamadryas glauconome grisea Jenkins 1983. AD i,ii,iv,vi–x,xii (MZFC); CAL X (SDNHM); COL (Jenkins 1983), X (MZFC); COM (Jenkins 1983); ESA i (ADW, MZFC); LSA (Jenkins 1983), vi (exCLGC); MAD iv (SDNHM); xi (LACM); PA xii; PACA i; PENU i; Peña Colorada, MZO vii (MZFC); TAM vi,vii (exCLGC); TECL vii; Turla X (SDNHM). Jenkins (1983) cites specimens intermediate between *H. glauconome glauconome* and *H. glauconome grisea* from COL, LSA and MAD.

Hamadryas guatemalena marmorata (Frühstorfer 1916). AD vi–x,xii; Cerro de la Media Luna, Coquimatlán ix (MZFC); COL (Jenkins 1983), ii,iii,v (SDNHM), iii (MZFC); ESA i (ADW, MZFC); Juárez (SDNHM); MAD (Jenkins 1983), xii (SDNHM); MZO i (ADW); PA xii (MZFC); PACA i (ADW, MZFC); PLAT x,xii (MZFC); TAM vii (exCLGC); TECL vii; Turla X (SDNHM).

Pyrrhogryra neaerea hypsenor Godm. & Sal. 1884. AD viii–ix,xi,xii (MZFC); CHAN i (ADW, MZFC); COL (AMNH), X (SDNHM); COM ix (SDNHM); ESA i (ADW); LSA vi (exCLGC); MAD iv (SDNHM); MZO xii (ADW, LACM); MZO, 5 mi N, on Hwy. to Minatitlán ix (LACM); PA xii (ADW); PACA i (ADW, MZFC); PENU i; PLAT vi (ADW), i,iv,x–xii; PORO xii (MZFC); Río Comala, COM ix (MZFC).

Temenis laothoe quilapayunia R.G. Maza & Turrent 1985. AD i,iv,viii–xi,xii (MZFC); COL (AMNH), iii,iv,x (SDNHM); PACA i; PLAT iv,vi,xi,xii; SUCH ix (MZFC); TAM vii (exCLGC).

Epiphile adrasta escalantei Descimon & Mast 1979. AD i,viii,xi,xii (MZFC); Cofradía

xi,xii (SH: Jenkins 1986); COSU x,xii (SDNHM, MZFC); COL xi (JC: Jenkins 1986); PLAT ix,x,xii (MZFC).

Dynamine dyonis Geyer 1837. AD viii–x (MZFC); COL (AMNH); MZO i (LACM); PACA i (ADW); PLAT xi (MZFC).

Dynamine postverta mexicana D'Almeida 1952. AD ii,vii–xi (MZFC); COSU ix; COL ii (SDNHM); ESA i; PENU i (ADW, MZFC).

Diaethria asteria (Godm. & Sal. 1894). AD x–xii (MZFC); COSU (De la Maza & Turrent 1985), x,xi,xii (SDNHM), x–xii (MZFC); COL (AMNH); COM (De la Maza & Turrent 1985); LSA iv (AME); PLAT viii–xii (MZFC); SUCH (De la Maza 1987); Volcán de Fuego (De la Maza & Turrent 1985). See Luis et al. (1996).

Cyclogramma bacchis (Doubleday [1849]). COL xi,xii (SDNHM); COSU viii,xi,xii (MZFC), X (SDNHM); LSA (De la Maza 1987); PLAT ix–xi (MZFC); Queserfa X (SDNHM), xii; SUCH X (MZFC).

Cyclogramma pandama (Doubleday [1849]). AD ii; BAG i (MZFC); San Antonio (De la Maza 1987).

Adelpha basilooides basilooides (Bates 1865). AD x; Cerro de la Media Luna, Coquimatlán ix (MZFC); COL xi (SDNHM).

Adelpha celeria diademata Frühstorfer [1913]. COSU xi (MZFC).

Adelpha fessonnia fessonnia (Hewit. 1847). AD iv,vi,ix (MZFC); CAL xi (SDNHM); CHAN i (MZFC); COL (AMNH), v (SDNHM); COM v (AME); MZO i (LACM); OJO v; PACA i (MZFC); PORO xii (ADW, MZFC); Volcanillos xi (MZFC).

Adelpha iphiclus massilides Frühstorfer [1916]. AD vii–xi; CAL i,xi; Cerro de la Media Luna, Coquimatlán viii; CHAN i (MZFC); COSU ix (SDNHM); COM i,ix,x (AME); ESA i (ADW); LSA v (Beutelspacher 1976), viii (SDNHM); PA xii; PACA i; PLAT i–iv, viii–xi,xii; PORO xii (MZFC); PJU X (SDNHM); Tepames X (SDNHM).

Adelpha ixia leucas Frühstorfer [1916]. PLAT xii (MZFC).

Adelpha leuceria leuceria (Druse 1874). "COL" vii (AMNH).

Adelpha naxia epiphicla Godm. & Sal. 1884. COM i (AME).

Adelpha phylaca phylaca (Bates 1866). AD xi; PLAT vi,xi,xii (MZFC).

Adelpha serpa massilia (C. Felder & R. Felder 1867). CHAN i (ADW); COL (AMNH); LSA X (Beutelspacher 1976); MZO i (LACM); PA xii (MZFC); PACA i (ADW); PORO xii (MZFC); Río Las Piedras vii (Beutelspacher 1976).

Marpesia chiron marius (Cr. 1780). AD iv,vi,vii,ix–xii (MZFC); CHAN i (ADW); ESA i (ADW, MZFC); Laguna Amela, TECM vii (MZFC); MZO xii (LACM); PACA i (ADW); PLAT i,iv,vi,ix,x,xii (MZFC); TAM viii (SDNHM).

Marpesia petreus tethys (Fabr. [1777]). AD vi–ix,xii (MZFC); CHAN i (ADW, MZFC); COSU x; COL iv,ix,x (SDNHM); ESA i (ADW); LSA (De la Maza 1987); MAD i,xii (SDNHM); MZO i (LACM); PA xii (ADW); PACA i; PENU i (ADW, MZFC); PLAT i,iv,x,xii; PORO xii (MZFC); TAM viii (SDNHM), xi (MZFC).

Archaeoprepona demophoon occidentalis Stoffel & Descimon 1974. AD i,ii,viii–x,xii (MZFC); COL iii (AMNH), i,xi,xii (SDNHM); ESA i (ADW); LSA (De la Maza 1987); PA xii (MZFC); PACA i (ADW, MZFC); PENU i (ADW); PLAT ii,iv (MZFC); PORO xii (ADW, MZFC).

Archaeoprepona demophoon mexicana Llorente, Descimon & Johnson 1993. AD vii–viii,xii (MZFC); COL xii (AMNH); COSU iv (MZFC); COM (De la Maza 1987); ESA i (ADW); PA xii; PACA i; PLAT xii (MZFC).

Prepona laertes octavia Frühstorfer 1905. PA xii (ADW); PLAT x,xii (MZFC).

Zaretis callidryas (R. Feld. 1869). LSA (De la Maza 1987); PORO xii (ADW).

Zaretis ellops anzuletta Frühstorfer 1909. AD i,ii,iv,vii–x,xii; BAG X (MZFC); COL (AMNH); LSA (De la Maza 1987); MAD v (SDNHM); PACA i; PLAT iv,ix,xii; PJU X (MZFC).

Siderone galanthis (Cr. [1775]). AD iv,viii,xii (MZFC); CHAN i (ADW, MZFC); COL (AMNH), v (SDNHM); ESA i (MZFC); LSA (De la Maza 1987); PA xii; PACA i (ADW); PENU i; PLAT xi (MZFC).

Hypna clytemnestra mexicana Hall 1917. AD vi (MZFC); Bahía Tangola (AMNH); COL (USNM); LSA (De la Maza 1987); PORO xii; TAM viii (MZFC), viii,ix (SDNHM).

Anaea aidea (Guérin [1844]). Agua Amarilla viii (USNM); AD i,ii,iv,vi–x,xii; Cerro de la

Media Luna, Coquimatlán viii (MZFC); COL (AMNH); LSA (De la Maza 1987); PACA i (ADW); PLAT i,ii,iv,vi,viii,x,xii (MZFC); PJu X (SDNBM); TECL vii; Tepames viii,x (SDNBM).

Consul fabius cecrops (Doubleday [1849]). AD ix (MZFC); CHAN i (ADW, MZFC); MAD (De la Maza 1987), X (SDNBM); PA xii (ADW, MZFC); PACA i; PENU i; PLAT xii; Río Comala, COM ix (MZFC).

Fountainea euryppyle glanzi (Rotger, Escalante & Coronado 1965). AD i,iv,viii (MZFC); COL (AMNH); LSA (De la Maza 1987); PENU i (ADW); PLAT iv,vi,ix,x,xii (MZFC); PACA i (ADW).

Fountainea glycerium glycerium (Doubleday [1849]). AD ii,x; BAG X (MZFC); COL (AMNH); PLAT ix,x,xii (MZFC).

Fountainea tehuana (Hall 1917). Poro xii (ADW, MZFC).

Memphis forrieri (Godm. & Sal. 1884). AD iv; CHAN i (MZFC); COL (AMNH); LSA (De la Maza 1987); MAD v (SDNBM); MZO i (ADW); OJO x; PA xii; PENU i (MZFC); Poro xii (ADW, MZFC); PJu x; TAM i,viii,ix,xi (MZFC).

Memphis pithyusa (R. Feld. 1869). AD ix; PA xii; PACA i; PLAT i,x,xii (MZFC); Poro xii (ADW); PJu X (SDNBM); TAM ix (MZFC).

• ***Memphis xenocles carolina*** W.P. Comstock 1961. "COL" X (AMNH). This is the only record of this species from western Mexico.

Doxocopa laure acca (C. Feld. & R. Feld. 1867). AD ii,vi,vii,ix,xi,xii (MZFC); CHAN i (ADW, MZFC); COL ix (AMNH) iv,v; COM ix (SDNBM); El Chanal vii (MZFC); ESA i (ADW, MZFC); LSA (De la Maza 1987); OJO xii (MZFC); PA xii; PACA i (ADW, MZFC); PLAT vi,xii (ADW), vii,x (MZFC); Poro xii (ADW, MZFC); Río Comala, COM ix (MZFC); TAM vii (exCLGC).

Doxocopa pavon theodora (Lucas 1857). COL iii (AMNH); LSA (De la Maza 1987); MZO xii (LACM).

Pessonnia polyphemus polyphemus Westw. 1851. AD i,vi–x,xii (MZFC); Bahía Santiago i (AMNH); CHAN i (ADW, MZFC); COL (AMNH), i,ii,xi (SDNBM); ESA i (ADW, MZFC); MZO (Godman & Salvini 1878–1901), i (ADW, LACM); PA xii; PACA i; PENU i (ADW, MZFC); PLAT iv,vi,ix,x,xii (MZFC); Poro xii (ADW, MZFC); Tonila, 10 mi S vii (AMNH).

Opsiphanes boisduvalii Doubleday [1849]. AD iv,vii–x,xii (MZFC); COL i (MZFC), ii (AME), ii,xi (SDNBM); COM ix (AME); LSA (De la Maza 1987), v (AME); MZO i; PA xii (ADW); PACA i; PLAT x,xii; Río Comala, COM ix (MZFC).

Opsiphanes invirae fabricii (Boisd. 1870). CAL i (SDNBM, MZFC); COL viii (AME), i–iii,v,x,xi (SDNBM), xii (AMNH); Huerta El Boliche, COL ix (MZFC); MZO (De la Maza 1987), i,xii (ADW); San Gerónimo viii (AME).

Opsiphanes tamarindi C. Feld. & R. Feld. 1861. COL i; OJO ix; PJu X (SDNBM); TAM vii (exCLGC).

Danaus eresimus montezuma Talbot 1943. AD vii,viii,x (MZFC); CAL X (SDNBM); CHAN i (ADW, MZFC); COL iv,v (SDNBM); PA xii (MZFC); PACA i (ADW, MZFC); PLAT ii,viii–x,xii (MZFC).

Danaus gilippus thersippus (Bates 1863). AD iv,vi,vii–x,xii (MZFC); Cornwallis Bay Naval Base, Socorro Is., RI xi (LACM; Brown 1990); CHAN i (ADW, MZFC); COL i–v,x,xi (SDNBM); ESA i (MZFC); MZO xii (LACM); PA xii; PACA i; PLAT vi,vii,x,xii (MZFC).

Danaus plexippus plexippus (L. 1758). Buenavista X (DGSV; Hernández, Martínez & Rodríguez 1981); COL i,iii,iv,xi (SDNBM); Esperanza viii (USNM); PACA i (ADW).

Lycorea halia atergatis Doubleday [1847]. AD xii (MZFC); COL (AMNH); PLAT iv,ix (MZFC).

Melinaea ethra flavicans C.C. Hoffmann 1924. COL xi (SDNBM); PLAT iv,vi (MZFC); SUCH (De la Maza 1987), iii (SDNBM); Volcanillos xi (MZFC).

• ***Mechanitis polymnia lycidice*** Bates 1864. "COL" (CMNH).

Dircenna klugii klugii (Geyer, 1837). SE slope Volcán de Colima xii (CAS).

Pteronymia cotytto (Guérin [1844]). MZO i (LACM).

Pteronymia rufocincta (Sal. 1869). PLAT vi (ADW), ix (MZFC); SUCH (De la Maza 1987).

Greta morgane morgane (Geyer 1837). AD vii,x; BAG x,xi (MZFC); COL xi (SDNBM); COSU vii,ix–xi (SDNBM), viii,x (MZFC); El Jabali viii (UCR); Hacienda San Antonio xi; PLAT vii–xii (MZFC); Rancho San Antonio ix (MZFC), xi (SDNBM); SUCH (De la Maza 1987), iii,viii (SDNBM); Volcanillos xi (MZFC).

Greta annette moschion (Godm. 1901). BAG X (MZFC); COL xi (SDNBM); PLAT X (MZFC); SUCH (De la Maza 1987).

Libytheana carinenta mexicana Michener 1943. AD i,vi,vii,ix,xi (MZFC); CHAN i (ADW); COL x,xi; COM ix (SDNBM); ESA i (ADW); LSA (De la Maza 1987); MAD xi (AME); OJO vii (MZFC), viii (SDNBM); PACA i (MZFC); PENU i (ADW).

Manataria maculata (Hopffer 1874). AD xii (MZFC); COM (De la Maza 1987); PLAT vi (MZFC).

Cyllopsis caballeroi Beutelspacher 1982. COL (Miller & De la Maza 1984); Volcanillos xi (MZFC).

Cyllopsis hedemanni hedemanni R. Feld. 1869. SE slope Volcán de Colima xii (CAS).

• ***Cyllopsis windi*** L. Miller 1974. Volcán de Colima xii (AME: Miller 1974).

• ***Cyllopsis diazi*** L. Miller 1974. ETE vi (ADW).

Cyllopsis suivalenoides L. Miller 1974. COL xi; Yerbabuena vi (SDNBM).

Dioriste tauropolis (Westw. [1850]). BAG x,xi (MZFC).

Euptychia fetna Butl. 1870. AD ix; El Jabali viii (UCR); PLAT viii–x (MZFC).

Hermeuptychia hermes (Fabr. 1775). AD i,ii,iv,vi,vii,ix–xii (MZFC); CHAN i (ADW); COL (AME), i–v,x,xi (SDNBM); COM (AME); El Jabali viii (UCR); ESA i (ADW, MZFC); MZO (AME), i,xii (ADW); OJO viii (MZFC); PA xii; PACA i (ADW, MZFC); PLAT iv,vii,xii (MZFC); TAM vii (exCLGC); Yerbabuena vi (SDNBM).

Megisto rubricata pseudocleophaea L. Miller 1976. AD iv,vi,viii (MZFC).

Paramacera xicaque xicaque (Reak. [1867]). Cerro Grande xi; ETE X (MZFC).

Pindis squamistriga R. Feld. 1869. AD i,ii,iv,vii,x,xii; BAG i; El Jabali viii (UCR); PLAT i,ii,iv,vi,viii–xii (MZFC); Rancho San Antonio xi (SDNBM); Río Comala, COM X (MZFC); Tinajas xi (SDNBM); Volcanillos xi (MZFC).

Taygetis mermeria griseomarginata L. Miller 1978. AD iv,vi,xii (MZFC); COL i (AME), viii,x (MZFC); COM i [Type Locality] (Miller 1978), vii,x (AME); ETE vi; PA xii (ADW); PACA i (ADW, MZFC); PLAT iv,vi,x,xii (MZFC); PORO xii (ADW).

Taygetis uncinata Weymer 1907. AD ii,iv,vi,xii; CHAN i (MZFC); COL v,vii,x,xi (AME), iii (SDNBM), viii (MZFC); COM iii,v,vii–x (AME); ESA i (ADW, MZFC); LSA xi (AME); MZO i; PA xii (ADW); PACA i; PENU i (ADW, MZFC); PLAT iii,iv,vi (MZFC); PORO xii (ADW); Rancho San Antonio xi (SDNBM); Río Comala, COM i,ix (MZFC).

• ***Taygetis virginia*** (Cr. 1776). AD iv,vi,xii (MZFC); CHAN i (ADW); ESA i (ADW, MZFC); PA xii (ADW); PACA i (MZFC); PENU i (ADW, MZFC); PLAT vi (MZFC).

Taygetis weymeri Draudt 1912. AD iv,v,xii (MZFC); COM vi (AME); El Jabali viii (UCR); ETE vi (ADW); PLAT iii,iv,v,x (MZFC).

Vareuptychia similis (Butl. 1867). COL v (AME), i (SDNBM); COM iii–v,ix,x; LSA X (AME); MAD iv (SDNBM).

Vareuptychia themis (Butl. 1867). AD i,ii,iv,vi,vii,ix,x,xii; BAG i; CAL ii,iii (MZFC), X (SDNBM); CHAN i; ESA i (ADW, MZFC); MZO i; PA xii (ADW); PACA i (ADW, MZFC); PENU I; PLAT i,ii,iv,vi–viii,x,xii (MZFC); PORO xii (ADW, MZFC); Tepames X (SDNBM).

Vareuptychia undina (Butl. 1870). AD vii–x; PLAT vii,viii (MZFC); TAM vii (exCLGC).

LYCAENIDAE (128 SPECIES)

Euselasia eubule (R. Feld. 1869). PLAT xi (MZFC).

Euselasia aurantiaca (Sal. & Godm. 1868). El Jabali viii (UCR).

Mesosemia lamachus (Hewit. 1857). AD xii (MZFC); PENU i (ADW); PLAT i,ii,ix,xi,xii; PACA i (MZFC).

Napaea umbra umbra (Boisd. 1870). BAG x; PLAT iii (MZFC); San Gerónimo vii (CMNH).

Rhetus arcius beutelspacheri Llorente 1988. PLAT viii–x (MZFC).

- *Calephelis argyrodines* (Bates 1866). ESA i (ADW); MZO viii (USNM); PA xii (ADW).
- Calephelis fulmen* Stichel 1910. COL ix (SDNBM); PA xii; PENU i (ADW).
- *Calephelis laverna laverna* (Godm. & Sal. 1886). COM x; LSA viii (AME).
- Calephelis mexicana* McAlpine 1971. COM iii (SDNBM); El Jabali viii (UCR); PA xii; PACA i (ADW); PENU i.
- Calephelis montezuma* McAlpine 1971. CAL i (SDNBM); CHAN i; El Jabali viii (UCR); ESA i; PA xii; PACA i (ADW, MZFC); PENU i; PORO xii (ADW).
- Calephelis nemesis nemesis* (W. H. Edw. 1871). COM i; El Jabali viii (UCR); Tonilita ii (AME).
- Calephelis perditalis perditalis* Barnes & McDunnough 1918. COL viii,x (SDNBM); COM i,viii (AME); El jabali viii (UCR); ESA i; PA xii (ADW); Tonilita ii (AME); Yerbabuena vi (SDNBM). As in the Jalisco butterfly list (Vargas et al. 1996), all *Calephelis* records presented here should be considered tentative, until a new revision of the genus is presented.
- Caria ino ino* Godm. & Sal. 1866. AD viii,x (MZFC); CHAN i (ADW); COM iii,x (AME), vi-ix (CMNH); Coquimatlán v (CMNH); PLAT vi,ix (MZFC).
- Caria stillaticia* Dyar 1912. AD x; El Jabali viii (UCR); PLAT vi (ADW), viii-xi (MZFC).
- Baeotis zonata simbla* (Boisd. 1870). AD vii,viii (MZFC); CHAN i (ADW, MZFC); COL iv,v (AMNH), viii (MZFC), ix (CMNH); COM i,x (AME), iii,vi,vii,x; El Jabali viii (UCR); LSA iv (CMNH), vi (exCLGC); PLAT vii; PORO xii (MZFC).
- Lasaria sula sula* Staud. 1888. AD ii,vii-xii (MZFC), vi (ADW); COL (AME: Clench 1972), iv (AMNH), X (MZFC); COM (CMNH: Clench 1972), iii,v,ix,x (CMNH); LSA (AME: Clench 1972), i (AME), xi (MZFC); PLAT ix,x (MZFC); TAM vi (exCLGC), ix (MZFC).
- Lasaria agesilas callaina* Clench 1972. AD vii,x (MZFC); COL (AMNH: Clench 1972), X (AMNH); PLAT ix,x (MZFC).
- *Lasaria sessilis* Schaus 1890. Tepames, 0.9 mi S ix (SDNBM).
- Lasaria maria maria* Clench 1972. AD vii-x (MZFC); COL i (AME); COM v (CMNH); PLAT ix,x (MZFC).
- Exoplisia* aff. *cadmeis* (Hewit. [1866]). ESA i (ADW, MZFC); PACA i (MZFC).
- Melanis cephise cephise* (Mén. 1855). AD xii (MZFC); COL (De la Maza 1987, USNM), ix,x (AME), v,xii (AMNH), iv,vii (SDNBM); COM ix,x (AME), ix (SDNBM), iii,x (CMNH); Las Conchas, Ixtlahuacán vii (MZFC, SDNBM); MAD iv (SDNBM); MZO i (LACM), xii (ADW); PENU i; PLAT ii,v,viii-x (MZFC); PJu viii (SDNBM), X (LACM); San Gerónimo vii (CMNH); San Francisco i,xii (AMNH); TECM iii,iv (INIA: Domínguez & Carrillo 1976). Two species are apparently represented by these records.
- Melanis pixe sexpunctata* (Seitz 1917). AD iii,viii-xii; CAL i (MZFC), ii,x (SDNBM); CHAN i (ADW, MZFC); COL ii-iv (AMNH); COM x,xi (AME); ESA i (ADW); LSA v (CMNH); MAD v,vi (SDNBM); MZO i (AME, LACM); OJO (SDNBM), i,ix (MZFC); PACA i (ADW, MZFC); PLAT ii,iv-vi,viii-x,xii (MZFC), vi (ADW).
- Anteros carausius carausius* Westw. [1851]. AD i,xi; CAL; COL ix (MZFC), iii,iv (AMNH); COM viii,x (AME); El Jabali viii (UCR); ESA i (MZFC); PA xii (ADW); PACA i; PLAT ii,xi (MZFC); Tepames, 0.9 mi S ix (SDNBM); Tonilita ii (AME).
- Calydna sternula hegias* R. Feld. 1869. El Jabali viii (UCR).
- Emesis ares ares* (W. H. Edw. 1882). El Jabali viii (UCR).
- Emesis mandana furor* Butl. & Druce 1872. AD ix; COSU X (MZFC); COM iv,v (CMNH); ESA i (ADW); Quesería X (MZFC).
- Emesis vulpina* Godm. & Sal. 1886. AD vi (MZFC); CHAN i (ADW); COL viii (CMNH), ix (SDNBM); COM i,vi (AME), ix (SDNBM), iv,v,vii-x,xii; Coquimatlán v (CMNH); ESA i (ADW); LSA v,vi (CMNH); PACA i (ADW, MZFC); PENU i; PLAT vi; PORO xii (ADW).
- Emesis poeas* Godm. & Sal. 1901. AD iv,vi-ix,xi (MZFC); COL (AMNH); COM vii (CMNH); ESA i (ADW); LSA vi (CMNH), viii,ix (SDNBM); PLAT vi (ADW), iv,vii,ix; TECL vii (MZFC).
- Emesis tenedia tenedia* C. Feld. & R. Feld. 1861. AD iii,iv,vi-xii (MZFC); CAL i

(SDNHM); CHAN i (ADW, MZFC); COL i,iv,x,xi (SDNHM); COM i (AME), iii–x (CMNH), iii (SDHNM); COSU vi,x (SDNHM); ESA i; PACA i (ADW, MZFC); PLAT i–iv,vi,viii–xi (MZFC); Quesería X (MZFC); San Antonio vii (CMNH); SUCH X (MZFC).

Emesis emesia emesia (Hewit. 1867). AD viii,x,xi (MZFC); Bahía Santiago xi (AMNH); CHAN i (ADW, MZFC); COL ix (MZFC); COM iv,v,viii; Coquimatlán v; LSA v (CMNH); MZO i (LACM), vii,viii (SDNHM), viii (UCR); PA xii (ADW); PORO xii (ADW, MZFC).

- ***Emesis tegula*** Godm. & Sal. 1886. CAL i; COL X (MZFC), xi (SDNHM); COM viii (AME); El Jabali viii (UCR); Las Conchas, Ixtlahuacán vii (MZFC).

Pseudonymphidia clearista (Butl. 1871). CAL i (MZFC); COM vi (CMNH); LSA vi (ex-CLGC).

Apodemia hypoglauca hypoglauca (Godm. & Sal. 1878). El Jabali viii (UCR); PLAT vii,x (MZFC).

Apodemia multiplaga Schaus 1902. COL i (AMNH); COM v,x (CMNH); Tepames, 0.9 mi S ix (SDNHM).

Apodemia walkeri Godm. & Sal. 1886. AD viii,ix (MZFC); CHAN i (ADW); COL iii,viii,ix; COM iv vii,x,xi (CMNH), viii (AME), viii–x; El Jabali viii (UCR); PLAT i,ii (MZFC).

Thisbe lycorias lycorias (Hewit. [1853]). AD vi,viii,ix (MZFC); COL iii (CMNH, AMNH), iv (SDNHM); COM vi (AME), vii (CMNH); LSA ix (SDNHM); MZO v (AMNH); PLAT i (MZFC), vi (ADW); PJU ix; Río Naranjo iv (SDNHM); TAM vi (exCLGC), X (LACM).

- ***Lemonias agave*** Godm. & Sal. 1886. "COL" (CMNH).

Synargis mycone (Hewit. 1865). AD vii,viii,xi,xii (MZFC); COL (AMNH); COM iii (CMNH); ESA i (MZFC); PACA i (ADW, MZFC); TAM X (MZFC).

Calospila zeurippa Boisd. 1836. OJO X (MZFC).

Pandemos godmani Dewitz 1877. "COL" (AMNH).

Adelotypa eudocia (Godm. & Sal. 1897). COM vii,viii (CMNH).

Theope virgilius virgilius (Fabr. 1793). PLAT vi (ADW).

Theope eupolis Schaus 1890. MZO i (USNM).

Theope diores Godm. & Sal. 1897. AD X (MZFC); COM vi,ix,x (AME); LSA (De la Maza 1987); PLAT vi,xi (MZFC). *Theope diores* may be a synonym of *eupolis*, but until the two taxa are reviewed, we have listed them separately.

Theope publius C. Feld. & R. Feld. 1861. COL (AMNH), iii (CMNH), iii,v (AME); CHAN i (ADW); COM iv (CMNH), viii,x (AME), iii; OJO ix; SUCH i (MZFC).

- ***Theope mania*** Godm. & Sal. 1897. PLAT vi (ADW),vii,ix,x (MZFC); SUCH iv (SDNHM), vi,x (MZFC).

• {***Theope hypoxanthe*** Bates [1868]}. COL ix; COM v (AME).

Theope pedias isia Godm. & Sal. 1878. AD iv (MZFC).

Calociasma lilina (Butl. 1870). MAD (De la Maza 1987).

Eumaeus toxea (Godart 1824). "COL" (AMNH).

Euenus regalis (Cr. 1775). AD xi (MZFC); COL iii (CIB); COM iii,iv (CMNH); MZO, 5 mi N ix (LACM).

Allosmaitia strophius (Godart 1824). El Jabali viii (UCR).

Pseudolycaena damo (Druce 1875). COL ii,iii,ix (CIB); COM iii,iv (CMNH); El Jabali viii (UCR); ESA i; MZO ii (CIB); PA xii (ADW, MZFC); PACA i; PLAT vi,ix (MZFC); TAM vii (exCLGC).

Arcas cypria (Geyer 1837). PLAT xi (MZFC).

Atides gaumeri (Godm. 1901). COL viii (USNM).

Atides carpasia (Hewit. 1868). MZO i (ADW).

Paiwarria umbratus (Geyer 1837). AD ix–xi; PLAT iv,ix (MZFC).

“***Thecla***” (*ligurina* group) ***ligurina*** (Hewit. 1874). El Jabali viii (UCR).

Contrafacia bassania (Hewit. 1868). El Jabali viii (UCR)..

Thereus cithonius (Godart 1824). "COL" (CMNH; Johnson 1989b); El Jabali viii (UCR).

Thereus oppia (Godm. & Sal. 1887). COL (USNM), iii; COM vii (CMNH); El Jabali viii (UCR).

Thereus orasus (Godm. & Sal. 1887). El Jabali viii (UCR).

Arawacus sito (Boisd. 1836). AD ii,viii,ix (MZFC); COL ii,iv,xii (CIB); COM iii,iv,ix,xii (CMNH); ESA i (ADW, MZFC); MZO i,xii (USNM), xii (CIB); PENU i (ADW); PLAT iv (MZFC).

Arawacus jada (Hewit. 1867). AD vi (ADW); COL iv (CIB), xi (exCLGC); El Jabali viii (UCR); PLAT iv,vi,vii,ix-xi (MZFC).

Rekoa meton (Cr. 1780). COM v (Robbins 1991); El Jabali viii (UCR); PLAT vi,ix,xi (MZFC).

Rekoa palegon (Cr. 1780). COL iii,iv (CIB), iii,iv,viii,xii (Robbins 1991); El Jabali viii (UCR); PLAT ii,iv (MZFC); ESA i (ADW).

Rekoa zebina (Hewit. 1869). COL iii; COM X (Robbins 1991); El Jabali viii (UCR).

Rekoa marius (Lucas 1857). AD xi (MZFC); COL iv; COM iv (Robbins 1991); OJO ix (LACM); PACA i; PLAT i (MZFC).

Rekoa stagira (Hewit. 1867). COL iii (Robbins 1991); PLAT xi (MZFC).

Ocaria ocrisia (Hewit. 1868). AD ix, X (MZFC); COM vii (CMNH); El Jabali viii (UCR); PLAT ix,x (MZFC).

Chlorostrymon simaethis (Drury 1773). AD vi (MZFC); COL iv (AMNH: Johnson 1989a); Socorro Is., RI iv (LACM: Brown 1990, LACM); PLAT xi (MZFC).

Chlorostrymon telea (Hewit. 1868). COL iii (CMNH, AMNH: Johnson 1989a); COM iv (CMNH); PA xii (ADW); PACA i (MZFC).

Cyanophrys herodotus (Fabr. 1793). AD ix (MZFC); CHAN i (ADW); ESA i (ADW, MZFC); PLAT ii,vi,ix-xi (MZFC).

Cyanophrys miserabilis (Clench 1946). COL (Clench 1946, BMNH: Clench 1981), ii,iv (USNM); El Jabali viii (UCR); PACA i (ADW, MZFC); PLAT vi (ADW), viii,xi (MZFC); An apparent male hybrid between *C. herodotus* and *C. miserabilis* was taken at PLAT in June by ADW.

Cyanophrys longula (Hewit. 1868). "COL" (AMNH); El Jabali viii (UCR).

Panthiades bitias (Cr. 1777). COL (AME: Nicolay 1976), ix,x (LACM), ix (USNM); CHAN i (ADW); COM (AME: Nicolay 1976), iii,v,ix (CMNH); PA xii (ADW).

Pantheiades ochus (Godm. & Sal. 1887). PLAT ix (MZFC).

Pantheiades bathildis (C. Feld. & R. Feld. 1865). AD iii (MZFC); CAL ii (SDNFM); CHAN i (ADW, MZFC); COL iii-v (CMNH: Nicolay 1976, CMNH), iii,iv (CIB); COM (CMNH: Nicolay 1976); ESA i (ADW, MZFC); MZO (AMNH), xii (ADW, CIB); PLAT vi (ADW), ii,ix (MZFC).

Oenomaus ortygynus (Cr. 1779). COL ix (CMNH); PLAT vi (MZFC).

Parrhasius polibetes (Cr. 1782). AD xi (MZFC); COL-COM (CMNH: Nicolay 1979); COM iii,iv (CMNH); PLAT ix-xi (MZFC).

Parrhasius moctezuma Clench 1971. El Huapuste, ETE X (MZFC); El Jabali viii (UCR).

Michaelus jebus (Godart 1824). PLAT vi (ADW).

Michaelus hecate (Godm. & Sal. 1887). COL (CMNH: Nicolay 1979), iv (USNM); PLAT vi (ADW).

Michaelus vibidia (Hewit. 1869). COL (AMNH: Nicolay 1979), ix (SDNFM).

Strymon melinus (Hübner 1813). Clarión Is., RI (CIB, USNM, Brown 1990, Vázquez 1957), i,iii,v (LACM); S side Clarión Is., RI iv (LACM).

Strymon albata (C. Feld. & R. Feld. 1865). AD i,iv,vi,viii (MZFC); CAL i (SDNFM); CHAN i; ESA i (MZFC); MZO i (USNM), xii (CIB); PENU i (ADW); PLAT iv (MZFC).

Strymon rufofusca (Hewit. 1877). "COL" (AMNH, USNM).

Strymon bebrycia (Hewit. 1868). PLAT vi (ADW).

Strymon bazochii (Godart, 1824). COL iv (SDNFM).

Strymon yojoa (Reak. 1867). AD ix,x (MZFC); El Jabali viii (UCR); PLAT i,vi (MZFC).

Strymon cestri (Reak. 1867). COL iii,iv (CMNH); El Jabali viii (UCR).

Strymon istapa (Reak. 1867). Clarión Is., RI (Brown 1990), i,v (LACM), v (CIB: Vázquez 1957), viii (CIB: Vázquez & Zaragoza 1979); El Jabali viii (UCR); Laguna Nam (CIB); MZO i (USNM), xii (CIB); PLAT iv (MZFC); PORO xii (ADW); Socorro Is., RI v (CIB: Vázquez 1957), i,v (Vázquez 1958), iv,v (LACM).

Strymon ziba (Hewit. 1868). "COL" (USNM).

Strymon serapio (Godm. & Sal. 1887). AD xi (MZFC).

"*Thecla*" (arza group) *tarpa* (Godm. & Sal. 1887). PLAT i (MZFC).

Kisutam ceromia (Hewit. 1877). COL iii,iv (CIB).

Electrostrymon matheuci (Hewit. 1874). AD ii (MZFC).

Electrostrymon sangala (Hewit. 1868). AD xi (MZFC); CHAN i (ADW); COL iv (CIB); MZO i; PA xii (ADW).

Electrostrymon canus (Druce 1907). COL ii,iii (CIB); PA xii; PACA i (ADW); PLAT ix (MZFC).

- *Symbiopsis* aff. *tanais* (Godm. & Sal. 1887). COL iv (CIB).

Calycopis demonassa (Hewit. 1868). COM iv,v (CMNH); LSA (De la Maza 1987).

Calycopis clarina (Hewit. 1874). COM iii (CMNH).

Calycopis isobeon (Butl. & Druce 1872). AD vi; CHAN i (MZFC); COL iii,iv (CIB); El Jabali viii (UCR); ESA i; PA xii; PACA i (ADW, MZFC); PENU i; PLAT i,iv (MZFC), vi (ADW).

Calycopis susanna Field 1967. COL (USNM), ii–iv,xii (Field 1967). This species is apparently a synonym of *C. isobeon*.

Tmolus echion (L. 1767). AD vi (MZFC); COL iv (CIB), ix (USNM); MZO i,xii (ADW); El Jabali viii (UCR); PLAT i,ii,v,vi (MZFC).

- *Tmolus crolinus* (Butl. & Druce 1872) "COL" (AMNH).

"*Thecla*" (keila group) *keila* (Hewit. 1869). "COL" (AMNH).

Theclopsis mycon (Godm. & Sal. 1887). El Jabali viii (UCR); PLAT X (MZFC).

Siderus tephraeus (Geyer 1837). AD xi (MZFC); CHAN i (ADW); El Jabali viii (UCR); ESA i (MZFC); MZO xii; PA xii; PACA i (ADW); PLAT vi (MZFC).

Ministrymon clytie (W. H. Edw. 1877). AD xi (MZFC); CHAN i (ADW); COL X (LACM), xi (SDNHN); El Jabali viii (UCR); ESA i (MZFC); PA xii; PENU i (ADW); PLAT ii,vi,ix,x (MZFC).

Ministrymon phrutus (Geyer 1832). CHAN i (ADW); El Jabali viii (UCR); PLAT vi,ix (MZFC).

Ministrymon azia (Hewit. 1873). AD xi (MZFC); COL X (SDNHN); ESA i (ADW, MZFC); MZO xii (ADW); PENU i; PLAT ii,iv,x (MZFC).

Ipidecla miadora Dyar 1916. COM iv,v (CMNH); El Jabali viii (UCR); PLAT vi (MZFC).

Brangas neora (Hewit. 1867). COL iv; COM viii (USNM).

Chalybs hassan (Stoll 1790). COL X (SDNHN); COM iv (USNM); PA xii (ADW).

Hypostrymon critola (Hewit. 1874). COL (CMNH; Clench 1975); COM viii,xi; LSA v (AME; Clench 1975); MZO i (ADW).

- *Nesiostrymon celona* (Hewit. 1874). "COL" (Johnson 1991).

Erora aura (Godm. & Sal. 1887). El Jabali viii (UCR).

Erora carla (Schaus 1902). COL ix (SDNHN); ESA i (MZFC).

- *Caerofethra carnica* (Hewit. 1873). PLAT ix (MZFC).

Brephidium exilis exilis (Boisd. 1852). PLAT vi (MZFC).

Leptotes cassius striata (W. H. Edw. 1877). AD i,ii,iv,vi–xii (MZFC); CHAN i (ADW, MZFC); COL iv (SDNHN); COM iv (CMNH); ESA i (ADW, MZFC); MZO i,xii (ADW); PA xii; PACA i; PENU i (ADW, MZFC); PLAT i,ii,iv–xii (MZFC); PORO xii (ADW, MZFC); PJU X (LACM); SUCH viii (SDNHN).

Leptotes marina (Reak. 1868). AD i,ii,vii,ix (MZFC); Bahía Braithwaite, Socorro Is., RI iv (SDNHN; Brown 1990); El Jabali viii (UCR); PLAT ii,v,ix,xii (MZFC); SUCH viii (SDNHN).

Zizula cyna cyna (W. H. Edw. 1881). AD i,ii,iv,vii,x,xii (MZFC); ESA i (ADW, MZFC); PLAT i,ii,iv,v,viii,xi (MZFC); PACA i (ADW, MZFC).

Hemiarthus ceraunus zachaeina (Butl. & Druce 1872). AD i,ii,iv,vi,vii,xi,xii (MZFC); CHAN i (ADW, MZFC); COL i,iv,x,xi (SDNHN); COM iii (CMNH); ESA i (ADW, MZFC); Esperanza xi (USNM); MZO i,xii (ADW); PA xii; PACA i; PENU i (ADW, MZFC); PLAT i,ii,iv–ix,xii (MZFC); Socorro Is., RI iv (LACM, LACM; Brown 1990).

Hemiarthus isola isola (Reak. [1867]). AD i,vi,xii; PLAT i,ii,x,xii (MZFC).

Celastrina gozora (Boisd. 1870). ETE vi (ADW, MZFC); PLAT iv,vii,x (MZFC).

Everes comyntas (Godart [1824]). AD ii,xii (MZFC); CHAN i (ADW); COL iii (CMNH); ESA i (ADW, MZFC); MZO i (ADW); PA xii; PACA i; PLAT i,ii,vii,xii (MZFC).

ACKNOWLEDGMENTS

We thank the following individuals and institutions for granting access to their collections and for assisting us in our search for Colima butterfly records: Frederick Rindge and James S. Miller (AMNH); John E. Rawlins (CMNH); John M. Burns and Robert K. Robbins (USNM); David K. Faulkner and John W. Brown (SDNBM); Phil R. Ackery, Julia E. Pope, and Campbell R. Smith (BMNH); Paul Arnaud, Jr. and Norman Penny (CAS); Julian P. Donahue, Brian Brown, and Brian Harris (LACM); Lee D. and Jacqueline Y. Miller (AME); Manuel Balcázar and Harry Brailovsky (CIB); Richard S. Peigler (DMNH); E. Richard Hoebeke and James K. Liebherr (CUIC); Greg R. Ballmer (UCR). We are grateful to Robert K. Robbins for his continued help with Theclinae determinations. José Luis Salinas and Mauro Vences (both MZFC) contributed many hours of fieldwork in Colima for this study. Alejandro Peláez Goycochea (INE-SEMARNAP) provided help with the format of this list. Lamberto González-Cota (C.E.F.E.S.O.M.A.C., Uruapan, Michoacán), and Sergio Hernández Tobías donated specimens from Colima cited in this study to the MZFC. Greg R. Ballmer and Ray E. Stanford kindly contributed several Colima butterfly records cited herein, and John W. Brown kindly sent us Colima material from the SDNBM for examination. We thank George T. Austin, Greg. R. Ballmer, and Ray E. Stanford for reviewing the manuscript and offering many useful suggestions that improved the quality of this paper. David J. Warren, Sally J. Warren (Greenwood Village, Colorado), and Quentin D. Wheeler (Cornell University) facilitated the completion of this study in many ways. Funding for the various stages of this study was provided by the projects DGAPA-UNAM IN-200394, DGAPA IN-211397, and PADEP in Mexico, and partly by the Pew Undergraduate Fellowship at Cornell University (to senior author).

LITERATURE CITED

AUSTIN, G. T. 1997. Notes on Hesperiidae in northern Guatemala, with descriptions of new taxa. *J. Lepid. Soc.* 51:316–332.

BAUER, D. L. 1960. A new species of *Chlosyne* (Nymphalidae) from western Mexico. *J. Lepid. Soc.* 13:165–169.

—. 1961. Descriptions of two new *Chlosyne* (Nymphalidae) from Mexico, with a discussion of related forms. *J. Lepid. Soc.* 14:148–154.

BEUTELSPACHER, C. R. 1976. Estudios sobre el género *Adelpha* Hübner en México (Lepidoptera: Nymphalidae). *Rev. Soc. Mex. Lep.* 2:8–14.

—. 1984. Mariposas de México. Fascículo I. La Prensa Médica Mexicana, S.A. de C.V., México, D.F. 128 pp.

BEUTELSPACHER, C. R. & H. BRAILOVSKY. 1979. Notas sobre depredación de lepidópteros por hemípteros. *Ann. Inst. Biol. Univ. Nac. Autón. Méx.* 50:777.

BROWN, J. W. 1990. Additions to the Papilionoidea (Lepidoptera) of the Revillagigedo Islands, Mexico. *Entomol. News.* 101:167–169.

BURNS, J. M. 1994. Split skippers: Mexican *Poanopsis* goes in the *origenes* group—and *Yretta* forms the *rhesus* group—of *Polites* (Hesperiidae). *J. Lepid. Soc.* 48:24–45.

—. 1996. Genitalia and the proper genus: *Codatractus* gets *mysie* and *uvydixa*—in a compact *cyda* group—as well as a *hysterectomy*, while *Cephise* gets part of *Polythrix* (Hesperiidae: Pyrginae). *J. Lepid. Soc.* 50:173–216.

CLENCH, H. K. 1946. Notes on the *amnytor* group of the genus *Thecla* (Lepidoptera: Lycaenidae). *Entomologist* 79:152–157.

—. 1972. A review of the genus *Lasaia* (Riodinidae). *J. Res. Lepid.* 10:149–180.

—. 1975. A review of the genus *Hypostrymon* (Lepidoptera: Lycaenidae). *Bull. Allyn Mus.* 25:1–7.

—. 1981. New *Callophryys* (Lycaenidae) from North and Middle America. *Bull. Allyn Mus.* 64:1–31.

COMSTOCK, J. A. 1953. Collecting butterflies in the coastal area near Manzanillo, Colima, with notes on the life history of a rare skipper. Bull. So. Calif. Acad. Sci. 52:43-45.

—. 1954. Life history notes on *Ascia monuste crameri*. Bull. So. Calif. Acad. Sci. 53:46-49.

—. 1955. Miscellaneous notes on North American Lepidoptera. Bull. S. Calif. Acad. Sci. 54:30-35.

D'ALMEIDA, R. F. 1966. Catálogo dos Papilionidae americanos. Sociedade Brasileira de Entomologia. 366 pp.

DE LA MAZA, R. E. 1980. Las poblaciones centroamericanas de *Parides erithalion* (Boisd.) (Papilionidae: Troidini). Rev. Soc. Mex. Lep. 5:51-74.

DE LA MAZA, R. E. & R. TURRENT D. 1985. Mexican Lepidoptera, Eurytelinae I. Sociedad Mexicana de Lepidopterología A. C., Publicaciones Especiales. 4:1-44.

DE LA MAZA, R. R. 1987. Mariposas Mexicanas. Fondo de Cultura Económica, S.A. de C.V., México, D.F. 302 pp.

DOMÍNGUEZ, Y. & J. L. CARRILLO. 1976. Lista de insectos en la Colección Entomológica del Instituto Nacional de Investigaciones Agrícolas, SAG. Foll. Misc. Sección Agr. Ganad. (México). 29:142-149.

FIELD, W. D. 1967. Preliminary revision of butterflies of genus *Calycopis* (Lycaenidae: Theclinae). Proc. U. S. Natl. Mus. 119:1-48.

FLORES, O. & P. GEREZ. 1994. Biodiversidad y conservación en México: vertebrados, vegetación y uso del suelo. Comisión Nacional para el Conocimiento y Uso de la Biodiversidad. Univ. Nac. Autón. Méx. México, D. F. 440 pp.

FREEMAN, H. A. 1969. Records, new species, and a new genus of Hesperiidae from Mexico. J. Lepid. Soc. 23 (Suppl. 2):1-62.

—. 1970. A new genus and eight new species of Mexican Hesperiidae (Lepidoptera). J. New York Entomol. Soc. 78:88-99.

—. (unpublished, undated manuscript). The distribution of Hesperiidae in Mexico. 142 pp.

GODMAN, F. D. & O. SALVIN. 1878-1901. Biología Centrali Americana. Zoología, Insecta, Lepidoptera, Rhopalocera. London, Taylor & Francis. Vols. II, III. 782 pp.

HERNÁNDEZ, V. H., I. MARTÍNEZ & S. RODRIGUEZ. 1981. Lepidópteros en la Colección Entomológica de la Dirección General de Sanidad Vegetal. Parte I. Fitófilo. 84:15-17.

HOFFMANN, C. C. 1940. Catálogo sistemático y zoogeográfico de los Lepidópteros Mexicanos. Primera Parte. Papilionoidea. An. Inst. Biol. Univ. Nac. Autón. Méx. 11: 639-739.

—. 1941. Catálogo sistemático y zoogeográfico de los Lepidópteros Mexicanos. Segunda Parte. Hesperioidae. An. Inst. Biol. Univ. Nac. Autón. Méx. 12: 237-294.

JENKINS, D. 1983. Neotropical Nymphalidae. I. Revision of *Hamadryas*. Bull. Allyn Mus. 81:1-146.

—. 1984. Neotropical Nymphalidae. II. Revision of *Myscelia*. Bull. Allyn Mus. 87:1-64.

—. 1985. Neotropical Nymphalidae. III. Revision of *Catonephele*. Bull. Allyn Mus. 92:1-65.

—. 1986. Neotropical Nymphalidae. V. Revision of *Epiphile*. Bull. Allyn Mus. 101:1-70.

—. 1990. Neotropical Nymphalidae. VIII. Revision of *Eunica*. Bull. Allyn Mus. 131:1-177.

JOHNSON, K. 1989a. Revision of *Chlorostrymon* Clench and description of two new austral neotropical species (Lycaenidae). J. Lepid. Soc. 43:120-146.

—. 1989b. A revisionary study of the Neotropical hairstreak genus *Noreena* and its new sister genus *Contrafacia* (Lepidoptera: Lycaenidae). J. New York Entomol. Soc. 97:11-46.

—. 1991. Cladistics and the biogeography of two trans-caribbean hairstreak butterfly genera: *Nesiostrymon* and *Terra* (Lepidoptera: Lycaenidae). Am. Mus. Novit. 3011:1-43.

JURADO, V. C. 1990. Inventario de Lepidópteros diurnos del Vivero Forestal "Lázaro Cárdenas," Municipio de Morelia, Michoacán. Tesis Biología. Escuela de Biología, Universidad Michoacana de San Nicolás de Hidalgo. 46 pp.

KENDALL, R. O. & W. W. MCGUIRE. 1984. Some new and rare records of Lepidoptera found in Texas. Bull. Allyn Mus. 86:1-50.

LAMAS, G. 1995. Comentarios taxonómicos y nomenclaturales sobre ninfálidos neotropicales (Lepidoptera: Nymphalidae), con la descripción de ocho subespecies nuevas. Rev. per. Ent. 37:59-71.

LLORENTE J. B., A. M. LUIS, I. F. VARGAS & A. D. WARREN. 1995. Lista de las mariposas del estado de Jalisco, Mexico. Rev. Soc. Mex. Hist. Nat. 46:35-48.

LUIS, A. M., J. B. LLORENTE & I. F. VARGAS. 1996. Distribución geográfica, estacionalidad y comportamiento de *Diaethria asteria* (Lepidoptera: Nymphalidae). Trop. Lepid. 7:39-44.

LUIS, A. M., I. F. VARGAS & J. B. LLORENTE. 1991. Lepidopterofauna de Oaxaca I: distribución y fenología de los Papilionoidea de la Sierra de Juárez. Publicaciones Especiales del Museo de Zoología. 3:1-119.

_____. 1998. Papilionoidea de Veracruz. Folia Entomol. Mex. 93, in press.

MILLER, L. D. 1974. Revision of the Euptychiini (Satyridae). #2. *Cyllopsis* R. Felder. Bull. Allyn Mus. 20:1-98.

_____. 1978. Notes and descriptions of Euptychiini (Lepidoptera: Satyridae) from the Mexican region. J. Lepid. Soc. 32:75-85.

MILLER, L. D. & J. DE LA MAZA. 1984. Notes on *Cyllopsis*, especially from Mexico, with description of a new species (Lepidoptera: Satyridae). Bull. Allyn Mus. 88:1-7.

NEILD, A. F. E. 1996. The butterflies of Venezuela. Part I: Nymphalidae I (Limenitidiinae, Apaturinae, Charaxinae). Meridian Publications, London. 144 pp.

NICOLAY, S. S. 1976. A review of the Hubnerian genera *Panthiades* and *Cycnus* (Lycaenidae: Eumaeini). Bull. Allyn Mus. 35:1-30.

_____. 1979. Studies in the genera of the American hairstreaks. 5. A review of the Hubnerian genus *Parrhasius* and description of a genus *Michaelus* (Lycaenidae: Eumaeini). Bull. Allyn Mus. 56:1-52.

ROBBINS, R. K. 1991. Evolution, comparative morphology, and identification of the eumaeine butterfly genus *Rekoa* Kaye (Lycaenidae; Theclinae). Smithsonian Contrib. Zool. 498:1-64.

ROTHSCHILD, W. & K. JORDAN. 1906. A revision of the American Papilios. Novitates Zoológicas 13:411-753.

SARH. 1992. Inventario Nacional Forestal de Gran Visión. México, 1991-1992. SARH-Subsecretaría Forestal. México, D.F.

SCOTT, J. A. 1985. The phylogeny of butterflies (Papilionoidea and Hesperioidea). J. Res. Lepid. 23:241-281.

SEITZ, A. (ED.). 1924. The macrolepidoptera of the world. The American Rhopalocera. Stuttgart, Alfred Kernen. Vol. V. Text. 1139 pp., 203 pl.

SKINNER, H. 1919. A new species of *Copaeodes* (Lepidoptera). Entomol. News 30:100.

SOBERÓN, J. M. & J. B. LLORENTE. 1993. The use of species accumulation functions for the prediction of species richness. Cons. Biol. 7: 480-488.

SPADEF, P., T. HAMILTON & J. W. BROWN. 1988. The biology of seven Troidine swallowtail butterflies (Papilionidae) in Colima, Mexico. J. Res. Lepid. 26:13-26.

TYLER, H. A. 1975. The swallowtail butterflies of North America. Naturegraph Publishers Inc., Healdsburg, California. 192 pp.

TYLER, H. A., K. S. BROWN, JR. & K. H. WILSON. 1994. Swallowtail butterflies of the Americas. Gainesville, Scientific Publishers Inc. 376 pp.

VARGAS, I. F., J. B. LLORENTE & A. M. LUIS. 1991. Lepidopterofauna de Guerrero I: distribución y fenología de los Papilionoidea de la Sierra de Atoyac. Publicaciones Especiales del Museo de Zoología. 2:1-127.

VARGAS, I. F., A. M. LUIS, J. B. LLORENTE & A. D. WARREN. 1996. Butterflies of the state of Jalisco, Mexico. J. Lepid. Soc. 52:97-138.

VÁZQUEZ, L. G. 1956. Papilios nuevos de México. IV. Ann. Inst. Biol. Univ. Nac. Autón. Méx. 27:473-485.

_____. 1957. Notas sobre lepidópteros de las Islas Revillagigedo I. Ann. Inst. Biol. Univ. Nac. Autón. Méx. 28:301-307.

_____. 1958. Notas sobre lepidópteros de las Islas Revillagigedo II. Ann. Inst. Biol. Univ. Nac. Autón. Méx. 29:349-353.

VÁZQUEZ, L. G. & S. ZARAGOZA. 1979. Tipos existentes en la Colección Entomológica del Instituto de Biología de la Universidad Nacional Autónoma de México. Ann. Inst. Biol. Univ. Nac. Autón. Méx. 50:575-632.

VELÁZQUEZ, C. A. 1976. Reporte de un viaje de colecta a los estados de Michoacán, Jalisco, Colima y Oaxaca. Bol. Soc. Mex. Lep. 2:6.

VELÁZQUEZ, DE., V. N. & C. A. VELÁZQUEZ. 1975. Viaje de colecta a Jalisco y Colima. Bol. Soc. Mex. Lep. 1:6-7.

WARREN, A. D. 1995. A new species of *Codatractus* from western Mexico. Trop. Lepid. 6:21-25.

_____. 1996. *Amblyscirtes patriciae*: description of the female and notes on its synonymy, behavior, habitat and distribution in Mexico. Trop. Lepid. 7:127-132.

_____. 1998. Hesperioidae (Lepidoptera). In Llorente, J. E., Gonzales S., E., Garcia A., N. A. & N. Papavero (Eds.), Biodiversidad, Taxonomía y Biogeografía de Artrópodos de México. Mexico City, Inst. de Biología, U.N.A.M. & CONABIO.

WARREN, A. D., I. F. VARGAS, A. M. LUIS & J. B. LLORENTE. 1996. Mariposas diurnas de Jalisco. Dugesiana 3:1-20.

Received for publication 15 October 1996; revised and accepted 22 January 1997.